

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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A Call to Patriotism

WITHOUT the building in the interior of the country of nitrate plants, munition factories and iron and steel works, far from the coast and from the Lakes, there can be no national safety in time of war.

If our financial and industrial leaders are so short-sighted as not to see this, or so absorbed in present money-making as not to be willing to give serious heed to this situation, they will be guilty of folly as great as would be that of Congress and the Administration if they did not take a single step to enlarge our navy and army.

This responsibility rests upon the leading bankers of the country, upon the great financiers of New York, who could easily turn tens of millions into the development of these industries in the South and West, and it rests with equal force upon the leaders in iron and steel and kindred interests.

Are the bankers and iron and steel men patriots in reality or patriots for revenue only? History will write the answer in indelible letters.

BALTIMORE, JUNE 22, 1916



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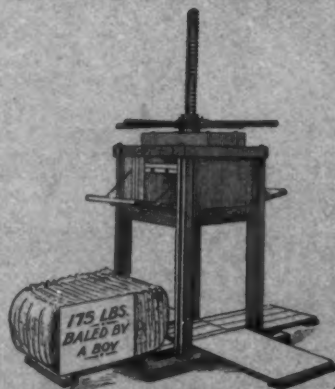
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GOD BLESS THE NATION'S HEROES!

WHEN men—men of peace, men of love for their fellow-man—put aside the calls, the honors, the profits of business, and cut loose from the tender ties that bind them to their homes and loved ones, and offer themselves as a sacrifice, if need be, upon the altar of their country's honor and safety, men who have not made the army their profession or life work, but men who, in volunteer State militia or national service, hear and answer the nation's call, hating war, but bravely, heroically preparing to battle for their country, the rest of us should stand with uncovered heads as they go marching by.

Not all the wealth of Mexico's mountains, bulging with mineral riches; not all the half-breed bandits who are robbing and murdering each other, are worth a good, honest American soul; but the nation may have a duty to humanity to perform far broader than to save Mexicans from each other, and a duty to our honor and our flag in protecting our people from murderous marauders.

We are facing a problem greater than Mexico itself.

In this hour of mighty responsibility every man who believes in prayer—and who is there that does not, even though some may loudly deny it?—should pray that the Almighty Ruler of the Universe shall guide our officials, give them wisdom and strength from on high, and shall so lead the people of misguided Mexico that they may see the true way to the largest civil and religious liberty and national prosperity; that the horrors of war, for their sakes and ours, may, by Divine guidance, be averted.

Our prayer should be that we may know the way in which God would lead us, and that as a nation we may seek not the path of ease and comfort, but the sublime path of duty, wherever that may lead us.

"Duty," said Robert Lee, the kingliest man of all the ages, "is the noblest word in the English language." Those who have heeded the nation's voice are following the call of duty as they see it.

And yet many a man who would gladly join them is a greater hero for staying at home than he would be in going. Home responsibilities keep many men from volunteering, and many thus held at home would really be cowards if they went, because they

would be shirking unshirkable responsibilities to those dependent upon them. Not unless the nation's life was at stake would such men be justified in volunteering for military service. Those who stand and wait, or who carry on the business affairs that make possible the maintenance of an army, may number among their members many a hero as true as those on the battlefield.

But for those who, out of war, seek to reap exorbitant profits; who, like the buzzards, strive to fatten on death itself; who are in evidence where profits are to be made, but never where dangers are to be faced—for such even hell itself seems too good.

God bless the heroes who can and do answer their country's call!

God bless the heroes whose duty compels them to remain at home!

MEXICO: THE MEXICAN SITUATION DUE TO UNPREPAREDNESS.

FOR the last few years, based on close personal correspondence with friends who know Mexico about as well as the writer knows Baltimore, and who have been in close touch with the situation in that country, the MANUFACTURERS RECORD has not expected any other outcome of conditions there than what we now see. These friends in personal letters have given the MANUFACTURERS RECORD their views on the whole Mexican situation unbiassed by personal interest, and knowing Mexico and the leaders in Mexico as fully as they do, they have steadily been predicting the present situation of affairs as inevitable. But the MANUFACTURERS RECORD, knowing the horrors of war, and desiring that our country, if possible, in maintaining its duty to its own citizens and the world, should be saved from entering upon a long and hard war with Mexico, has hoped against hope that some solution might be found other than that to which we seem now to be tending.

Those familiar with our unpreparedness have known for the last two years that it was scarcely possible to put into Texas as many as 15,000 equipped American soldiers without draining every other point. The very weakness of our army and our unprepared condition has stirred the contempt and increased the hatred of a large proportion of the Mexican population, led by unscrupulous demagogues seeking only their own personal advancement.

If, unfortunately, we should be forced into war with Mexico, it will be largely due to our wholly unprepared condition, for the Mexicans knew of the smallness of our army as much as we did, and they knew that for more than a year the Government did not find it feasible to mobilize as many as 15,000 men along the 1000-mile border. The leaders have used this condition to stir up enmity of the lower classes and make them believe that Mexico can whip the United States. Had Mexico known that we had a respectable army, thoroughly equipped, we would not now be facing the danger which we are confronting.

If we go into Mexico the lives lost on both sides will be largely chargeable to the failure of this country to maintain an adequate army; and the Pacificists in Congress and out of Congress, who have fought against national preparedness, will have to share the responsibility of the bloodshed and of the death of American soldiers and of Mexicans because blindly they have refused to see or seek the truth.

If Germany had known two years ago that Eng-

land had a million or more thoroughly trained and equipped men in its army, Europe would not have been deluged with blood. If Mexico had known that we had available at any moment not less than 100,000 thoroughly trained and equipped men in the regular army, available on the Texas frontier at any time, there would have been very few, if any, murders of American citizens, no inroads upon American soil, and little, if any, danger of war. Our unpreparedness will be responsible for all that may happen in the struggle, which, we trust, may be averted, but which now seems so imminent.

Let it not be imagined for one moment that if we enter war with Mexico it will be an easy task, or won except at a heavy loss in men and money. Mexico is, roughly speaking, in area about the size of the sixteen Southern States. It is a country of vast mountain ranges, of vast deserts, of the extreme of tropical luxuriance and the barrenness of mountains without vegetation. It is a country of extremes in wealth and in poverty, of education and of densest ignorance. It is a country of extremes of magnificent homes of the rich and of the dreariest huts and adobe houses of the poor.

The City of Mexico, with a population of about 400,000, is situated in a superbly beautiful valley, having an elevation of 7500 feet. In the distance can be seen mountain peaks with elevations of 16,500 to 17,500 feet. Some ten or twelve years ago, when the writer was in the City of Mexico, it was accounted one of the most beautiful cities in the world, and was often referred to as the Paris of America. Its dry goods and jewelry stores very far surpassed in size and beauty of display any similar stores in Baltimore. Its magnificent boulevard, stretching from the newer portion of the city three miles to the Palace of Chapultepec, is 600 feet wide, lined with superb homes. Its wealthy people, educated their children abroad, largely in Paris. They live in luxury in homes that would do credit to Fifth avenue. There are several banks in the City of Mexico, or were prior to the war, each having a capital of \$25,000,000 or over, and in various parts of that country there were other great financial institutions commensurate in capitalization and influence with these big banks. There is one cotton mill in Mexico with \$15,000,000 capital said to have the largest equipment on one floor of any in the world. There is a steel plant at Monterey built at an initial cost of \$10,000,000, and many other iron works, foundries and shops throughout Mexico. An illustration of the profit of some of their enterprises is seen in the fact that at the time of this visit one mining company, so the writer was informed, had for years paid monthly dividends of 250 per cent., and the financial columns of the local papers quoted its stock at \$25,000 a share.

Enrique C. Creel, the president of one of these \$25,000,000 banks in the City of Mexico, and also of a \$4,000,000 bank at Chihuahua, at one time Ambassador to the United States, was owner of a ranch of 2,500,000 acres, of a cottonseed-oil mill and soap factory capitalized at \$1,500,000, an iron and steel plant capitalized at the same amount, and of various other industries representing some millions of dollars. His father-in-law, Governor Terrazza, had a ranch of 6,000,000 acres, and a cousin had a ranch of 1,000,000 acres, which was managed by Creel. This condition was typical of the magnitude of some of the larger business operations in Mexico and of the men who in finance and government dominated the country. Creel had broad statesmanlike qualities, and as a financier was a man of exceptional ability.

Mexico has a longer coast line than that of the United States, excluding Alaska, on the Atlantic, Pacific and the Gulf. It is a country of amazingly great mineral wealth, and in some portions of

equally as great agricultural potentialities. With a population of about 16,000,000 or 17,000,000, many of whom during the last few years have been trained to war, who are well equipped, hardened by actual fighting experience, knowing these great mountain ranges and every by-path, able to endure the tortures of the deserts and of the heat of the tropics, they can, if they unite against this country, give us very serious and long-time trouble.

It was in the light of these facts, known to every man who cared to investigate the subject, as well as the European situation, that the MANUFACTURERS RECORD has been so persistently seeking to arouse our country to the need of preparedness that we might be saved from war.

A BALTIMORE BANK SETS THE PACE IN AIDING THE MILITIA.

WITHIN a few hours after the President's call to the militia of the country the following advertisement appeared in the daily papers of Baltimore:

TO THE MARYLAND MILITIA

Preparing for Service on the Mexican Frontier.

Some 2500 Maryland men are now about to leave their families and homes for the Mexican frontier.

You may or may not have made arrangements for the carrying out of your personal affairs while you are gone. There are no doubt many things that you will of necessity leave undone when you go.

This bank can think of no better way to serve you than to offer to look after and take care of any personal or business matters for you which may arise at this time or at any time during your absence. No service will be too small or too big for us to cheerfully execute.

WE WISH TO DO THIS WITHOUT ANY CHARGE WHATSOEVER FOR OUR SERVICES.

We are trying to secure a list of those men who will be called into active service, and if we are successful in doing so, will write to each one a letter explaining just how they can take advantage of this offer.

If it is not possible for us to get these names, any officer or private in any of our State militia organizations is cordially invited to come to the bank, where every attention will be given and all details fully explained.

BALTIMORE COMMERCIAL BANK.

The spirit which prompted this action had in it far more than that of mere self-seeking notoriety on the part of this bank. Its action was taken as an expression of the deep interest of the directors of the Commercial Bank in the welfare of the nation, and in this way they sought to give recognition to their appreciation of the responsibility which rests upon the business organizations of the country to do their utmost to lessen the burdens which fall upon the men who have been called by the President to be ready, if needed, to defend the country. This spirit, which found expression so promptly and in such a helpful manner, is worthy of the highest commendation. It should be the spirit of every business institution in this country. The members of the State militia, unlike the regular troops, are not in the army as a regular business or a profession. Love of their country and the belief in the importance of the creation of a military force available at any moment has been the inspiring motive with many of these men.

Nevertheless, a large proportion of them, though ever ready to respond to the call of duty, have not expected that they would have to engage in war. They are, therefore, through this volunteer work rendering a great service to the nation, and in that way to every business interest in it. Many of them are men of moderate means who have large responsibilities at home. If they are called by the nation to engage in war, they will be risking their lives for the welfare of others and endangering the happiness of those dependent upon them. If there is in this land the spirit of patriotism which should prevail, and we believe that there is, then the task of these men in every State in the Union should be made as easy as possible by the elimination of as many troubles at home as can be solved by others. Every militiaman who responds to the call should have his full salary continued by his employers, no matter how heavy the drain upon the business.

We do not know what plan the Commercial Bank has in mind, but, as explained by one of its officers,

its people promptly recognized that many of the members of the State militia would have personal responsibilities of many kinds needing immediate attention. Some of them might have no one upon whom they could call to look after details of family or business matters, and so the bank steps in and offers to use its facilities to the utmost to assist members of the State militia in meeting all problems that they may have to solve in being called from home to active military duties.

We do not know what official or director had the inspiration and the initiative to suggest such a plan, but whoever he is he deserves the heartiest expression of commendation from the public at large, and the bank likewise deserves a full recognition of its readiness to undertake a service of this kind.

In every State in the Union business organizations, banks and business men generally should not only stand ready and willing to co-operate, but should, like the Baltimore Commercial Bank, take the initiative in offering co-operation to the members of the State militia who are offering infinitely more to the country in offering their lives than any business institution can offer in co-operating with them to make their home-leaving problems as light as possible.

SOUTHERN IRON ORES AT LAST BEING APPRECIATED IN WALL STREET.

WE are glad to see that Wall Street is at last beginning to put a proper estimate upon the value of Southern iron ores, as indicated in an article in the Wall Street Journal covering the rapid development of the business of the Gulf States Steel Co. of Birmingham, to which reference was made in the MANUFACTURERS RECORD last week. In reviewing the progress of this company the Wall Street Journal says:

Work on the ore slope of the Gulf States Steel Co., which has been under way for three years, is nearing completion. It is expected that the first ore will be taken out in August. The ore fields comprise 1781 acres and have an estimated content of 100,000,000 tons of self-fluxing ore. A conservative valuation of these lands is \$35,000,000—equivalent to more than three times the total stock outstanding. They are carried on the books at \$1,100,000. The Gulf States Steel Co. is second only to the United States Steel Corporation in the holdings of ore in the Birmingham district.

The depth of the ore is 2659 feet, and only about 150 feet remains to be driven. The ore lands are completely surrounded by the fields of the Tennessee Coal & Iron Co. and are of the same character. On the basis of testimony taken before the House of Representatives in connection with the Steel dissolution suit in 1911, the ore in the district in which the Gulf States Steel Co.'s property lies is worth 35 cents a ton in the ground. In view of the demand and high prices for self-fluxing ore, present estimates run ahead of that figure. It is probable that the company will make a revaluation of these lands in its next annual statement. A minimum valuation of \$15,000,000 has been suggested, and this would be \$4,000,000 in excess of the stock outstanding. The only lien on the property consists of \$254,000 bonds. This is the extent of the company's funded debt.

Realization of the value of the ore lands, coupled with the relatively enormous earnings, has caused a rise in the common stock in the last 15 months from \$3 to \$90 a share, a rise from \$40 to \$101 in the first preferred and from \$15 to \$90 in the second preferred convertible stock. Accrued dividends on the 7 per cent. first preferred stock have been paid up and the directors have just placed the second preferred on a 6 per cent. basis. The common stock is now earning at the rate of 41.5 per cent. after all charges, depreciation and full dividends on the first and second preferred stocks.

Earnings of the Gulf States Steel Co. in 1914 were only \$112,000. This sum was equaled in one month in January, 1916, and the earnings for May, 1916, amounting to \$304,890, were practically double the January earnings. It is expected that earnings by fall will reach \$300,000 a month, or at the rate of 64 per cent. on the common stock.

Gulf States Steel manufactures some pig-iron, ingots, billets and slabs. The principal source of revenue, however, is from finished products, including wire rods, woven-wire fence, barbed wire, nails, staples and tie plates. The plant capacity is about 165,000 tons a year. Barbed wire is manufactured in large quantities. The net profits on some of the products sold, it can be stated, are in excess of \$50 a ton. The unfilled orders are the largest in the company's history.

The intrinsic value of Southern ore properties when in large bodies, such as that owned by the Gulf States Steel Co. and other concerns in Alabama and in other Southern States, has never been adequately appreciated by the financial interests of the country; indeed, with comparatively few exceptions,

the financial powers of the United States have largely ignored the possibilities of iron and steel development in this section. The success of the Gulf States Steel Co. ought to stimulate other people to a recognition of the opportunities that are still available in the South.

It is, of course, fully understood by intelligent people everywhere that the United States Steel Corporation in the development of its properties in Alabama is demonstrating the inherent strength of that situation, and that if it had not been for the unfortunate Government suit against the Steel Corporation, its Alabama properties would have been much more largely developed before this. But the success of a company such as that of the Tennessee Coal, Iron & Railroad Co., backed by the power and wealth of the Steel Corporation, will probably hardly be as effective in attracting the attention of independent iron and steel people to the South as will the success of an independent company like the Gulf States Steel Co., which has had to work out its own salvation. What it has done should stimulate others. Whether the ore holdings of this company are second to those of the Tennessee Coal, Iron & Railroad Co. in Alabama, as stated in the Wall Street Journal, we do not undertake to say, as other independent companies in the district might dispute this statement, but that a decent value is being put on these Southern ores, and that this value is being recognized in Wall Street, is a matter of far-reaching importance.

BANKERS FINANCING FARMERS.

AT a meeting in Leesburg, Florida, recently the Lake County Bankers' Association was organized by representatives of eight of the nine banks in the county and a fund of \$1500 was subscribed by the members to start a campaign of education as to agriculture and live stock raising, while the bankers also agreed to finance the purchase of blooded animals for breeding purposes and to do other necessary financing for the upbuilding of the rural interests by building silos, dipping vats and fencing. Especial attention will be devoted to the eradication of the cattle tick. It is expected that all the banks in the county will unite in this work. The county newspapers have agreed to publish the educational material at special rates, thus doing their share in the co-operation that is designed for the general benefit of the section.

The bankers declared their belief that loans made to industrious farmers of good habits on live stock and improvements will be safe and will furthermore advance the development of the county along substantial lines.

This step of the Lake county financial institutions is in line with other movements hitherto described in the MANUFACTURERS RECORD, and is additional evidence of the progressive spirit which is spreading through the South, including regions more or less remote from the large centers of population. In its results it means that the standard of life will be raised, that local credit will be strengthened, that the population will increase and that education and thrift will make headway, accompanied by all the excellent consequences of better methods and higher aims. The example of the Lake County Bankers' Association will doubtless bear fruit in other parts of Florida, a State which is destined to be much greater than it even now is, as well as in other parts of the South.

That the same spirit exists elsewhere in Florida is shown by an article in the Pensacola Journal quoting E. R. Malone of the American National Bank as saying that farmers who desire to improve their herds by the purchase of thoroughbred stock will get all the encouragement and assistance possible from him and his bank, provided that it can be satisfactorily demonstrated that they are able to successfully carry out their plans.

MANY papers which are making such positive predictions as to the Presidential election will be busy next November explaining why things went the other way.

WHY THE SOUTH SHOULD DEVELOP LOCAL INSURANCE INTERESTS.

AMONG all the agencies for the material development of the country there are few, if any, having a more far-reaching effect than well-managed insurance companies. Much of the wealth of the nation has been drained to New York and to New England by the powerful magnet of the great insurance companies whose homes are in New York and New England. They have accumulated billions of dollars in assets. It is the power of these accumulations that makes possible the use of this money through Eastern channels in the building of railroads, in the construction of great buildings, and in the financing of many undertakings the establishment of which broadens the field of usefulness of this money.

This accumulation of money acts as a mighty fertilizing power on the soil of the business activities of the East to bring forth a harvest of almost limitless wealth. The South is a contributor to the volume and effectiveness of this fertilizing power. As this section between 1865 and 1900 was drained of more than 5,000,000 of its white people, whose emigration lessened the strength and wealth of the South, and whose going into other sections enormously enhanced their progress and prosperity, so the South during the last 50 years has been unceasingly drained of strength of financial power by the money poured into the Eastern insurance companies. It is natural that these Eastern companies, seeking to continue their power over the financial operations of the nation, should struggle in every way possible to maintain their domination and to discourage the organization of insurance companies in the South. Every unwise effort in the establishment of insurance companies by men lacking experience or the capital needed to put insurance business on a sound, legitimate basis is used by the agents of the big outside companies to discredit Southern insurance possibilities with a view to keeping the stream of capital steadily flowing from the South into the coffers of these great Eastern insurance companies. This is perhaps natural, but it is not good sense on the part of the big companies of the country, nor is it good sense on the part of the people of the South to be influenced by such pleas.

There is no more sacred financial obligation on earth than that of the insurance business. The man who, year after year, strains himself financially in order to protect his loved ones, when he is gone, should command the supremest executive ability and honesty of men, that his family may not suffer through the failure of insurance operations. If there is any business in which integrity of the highest kind and financial skill are demanded, it is in the insurance business, for upon the ability of insurance companies to pay their obligations rests the welfare of beneficiaries whose husbands and fathers and brothers have died trusting that they had made provision for them through insurance.

Insurance, therefore, becomes a sacred, almost a holy calling, and the man who does not recognize it in this light and idealize it ought never to be engaged in the insurance business. It is, therefore, essential that insurance companies should be safeguarded by law to such an extent that irresponsible men, or even good men lacking the capital and the judgment needed, should never be permitted to organize an insurance company. This should be the primary foundation of the insurance business, and on this the insurance interests of the nation should build solidly for all time.

The insurance business is in its infancy. More and more will its importance be recognized. Men will come to see that the supreme question of preparedness for the welfare of their loved ones demands adequate insurance, regardless of their wealth or their poverty, for no one knows when his wealth may be taken from him, and no poor man, however small may be his means, has a right to leave his family unprotected by insurance.

Moreover, insurance will spread into new avenues. There is an increasing disposition to insure the lives of important officials for the benefit of the companies that they manage, and to insure the lives of partners in a firm for the benefit of the business, in

order that these corporations and these firms may not find themselves in financial difficulties by reason of death.

With this increasing magnitude of insurance business before the country, it would be a serious mistake for the South not to intelligently and vigorously seek to develop its own insurance interests. If the many millions of dollars annually sent out of the South for insurance in excess of the amount paid back to the South could be kept at home, the aggregate would be so great that added strength would be given to the financial interests of this section, and this money would prove a fertilizing agent to all the business interests of this section, just as the insurance money has made possible the vast financial operations of New York, of Connecticut, of Milwaukee and other places where big insurance companies exist.

There should, therefore, be a combination in the South of men of the highest integrity and financial acumen co-operating for the development of insurance interests, and of men and women who want their lives insured in safe and substantial companies, and who, in doing so, can at the same time benefit their section. The MANUFACTURERS RECORD believes that the combination is possible. It believes that safety is the first condition on the part of the insured, but it believes that if Southern people will intelligently investigate the best companies in the South, and if the strong leaders in this section will co-operate to see that no insurance company but that of the highest character is permitted to operate in the South, a long step will have been taken toward the South's financial independence.

Mr. Robert F. Moore of Atlanta, a recognized authority in the insurance world, in this issue presents some very interesting facts in regard to insurance matters in connection with these interests in the South. There have been failures of insurance companies in the South, but there have been still more failures in the Eastern and Western States, and the statistics of these failures are given in Mr. Moore's article.

It would be as grave a folly for this section to fail to encourage and develop its own home insurance interests because through unwise management or downright rascality a few companies have failed as it would be for the South to refuse to establish any more banks, to develop any more cotton mills or iron interests, any more farms or any more factories of any kind because some of all of these interests have not succeeded. The failure of a few cotton mills in the South has not lessened the ardor of this section for developing the cotton-mill business. The failure of some farmers has not caused a general distrust of all farmers. The failure of some lumber concerns has not resulted in halting all lumber-mill progress, and the failure of some Southern insurance companies should in no wise halt the development of the insurance business of this section.

The effort of the big companies of the East to keep people from insuring in local Southern companies should not influence people against substantial, solid, well-managed Southern companies. Good judgment is required on the part of those to be insured as well as on the part of insurance managers. It is time for the South to begin to live at home, to have faith in itself, in its own people and in the potentialities of Southern opportunities. Not until this comes about will there be the well-rounded financial and business development which the marvelous natural advantages of this section justify, and until their development brings general prosperity to the whole South this section will have failed to measure up to its opportunities.

Around the insurance business should be thrown every possible safeguard, and then there should be the heartiest co-operation on the part of the people of the South in the development of strong Southern insurance companies.

"RAISING THE STANDARD OF LIVING."

FROM the Allan D. Roberts Engineering Company, of Kingston, Jamaica, the MANUFACTURERS RECORD has an interesting letter in regard to the business situation in that country, and indicating the opportunity for an increased demand there for American machinery and labor-saving devices.

According to this company "the war is rapidly raising the standard of living in Jamaica, and a great deal more money is coming in owing to the high prices of sugar and most other produce."

Wages in Jamaica, we are told, before the war "were very low and it was usually cheaper to employ labor than labor-saving devices. Many of our best laborers have now gone to the front, and also owing to the ease of living which does not call for any prolonged work except for the purchase of luxuries, even ordinary labor is becoming harder and harder to obtain, and wages are steadily rising. Even at increased wages labor often cannot be had at all. This means the employment of labor-saving machinery. This applies to agriculture as well as to manufactures. For example, we have just written for price on stump pullers. No demand formerly existed for these, but we believe we can now dispose of quite a number."

The effect of the war, as indicated in this letter from Jamaica, is destined to be felt in the same way in many parts of the world, and especially in Europe. Conditions there will compel the use of labor-saving machinery as never before. Every device for efficiency that has been learned in the gigantic death-dealing struggle will later on be turned to account in the development of higher efficiency in industrial and general business pursuits. There will be a quickening of thought, a quickening of spirit, a quickening even of physical activity, and men will have learned to do without many things which heretofore they thought were necessary, while at the same time they will have learned to do many things which they would never before have imagined possible.

Out of this condition will come an intensity of life such as the world has never known. There will be a broadening of spiritual activities, a deepening of the sense of the reality of things. The rich man and the poor man, the nobleman and the valet, who have had to meet on equal terms in this great campaign, will never again be so widely separated as they were before the war. Humanity will have a new meaning for many, and industrial and business achievements will be pressed with a vigor which the world has never seen. The men who have done the fighting on the battlefield and whose lives may be spared, will demand larger consideration and more influence in state and municipal affairs than in the past, and there will be throughout Europe, as our correspondent says there is already in Jamaica, "a rapidly rising standard of living." And to this might be added, a rising standard of ethics and a rising determination to make impossible war conditions such as have drenched Europe with human blood.

Unless the people of the United States take cognizance of this situation, we shall lose out spiritually as a nation, industrially as the world's leader in manufacturing and financially as to the domination which we have hoped for of the world's finance and commerce.

When a nation has lost its soul or its spiritual idealism, it will soon lose its material prosperity; and if a nation become too absorbed in the purely material side of life and in money making, forgetting its responsibilities and running the risk of losing its honor, its destiny will soon be sealed. It has been so in the past, and it will be so in the future.

ACCORDING to Democratic papers, it is a waste of energy and money for Mr. Hughes to run. He might as well send his congratulations to Mr. Wilson now and resume his law practice. And according to Republican papers Mr. Wilson should at once make his plans for work after March 4, as the White House will then have a new occupant. Each party is absolutely certain its candidate will win—or at least it says so.

IN a letter to the MANUFACTURERS RECORD Mr. John M. Wilson of Lottie, La., who recently predicted the "practical exhaustion of the present salt, sulphur, iron and coal mines, etc., of the country within the next decade," writes us that he had intended to say "the next five decades."

HOW THE SOUTH CAN "SOW AN ACT" AND "REAP A DESTINY" OF WEALTH.

THE aggregate deposits in the savings banks of the United States foot up, in round figures, \$5,000,000,000. The bulk of this, or \$3,713,330,000, will be found in the savings banks of New England, New York, Pennsylvania, New Jersey and Delaware, leaving only about one-fourth, or \$1,283,000,000, for the rest of the country.

The South has to its credit in savings banks only \$211,000,000, or but a fraction over 4 per cent. of the aggregate of the savings banks' deposits of the country, and more than one-half is in Maryland. Omitting Maryland, where savings bank business has been fairly well developed, at least in Baltimore City, the South has only about 2 per cent. of the aggregate savings banks' deposits of the country. That is a sad record, for it indicates that this section has not yet developed the habit of thrift as represented in the constant putting aside of a few cents or a few dollars in the savings bank for the inevitable rainy day.

Not until the South gets into the habit of putting aside, little by little, a spare penny or a spare dollar in savings funds, and not until savings banks, managed by the very best financial people in their communities, are generally established, will the South measure up to its opportunity.

It has been well said, and it fits this situation, that "we first get a habit, and then the habit gets us." If the South gets the habit of saving as New England has done, the habit will soon get the South, as it has done New England and New York and other Middle States.

The statistics of the savings banks of the country, including stock banks, as well as the mutual savings banks, show the following interesting figures of savings deposits per capita:

Connecticut	\$283.00
Massachusetts	266.00
New Hampshire	223.00
New York	195.00
Rhode Island	153.00
Vermont	150.00
Maine	131.00
Maryland	75.00
Delaware	60.00
New Jersey	46.00
District of Columbia	36.00
Pennsylvania	29.00
Louisiana	10.20
Tennessee	7.07
South Carolina	6.78
Virginia	5.12
North Carolina	4.39
Georgia	4.22
West Virginia	4.10
Kentucky	2.82
Florida	1.87
Mississippi	1.24
Alabama46

According to the report of the United States Comptroller of the Currency, there are no strictly savings banks in either Arkansas or Texas, and none are mentioned for either Missouri or Oklahoma, although there are a number of banks in those States which have savings departments.

Taking the aggregate deposits of some of the States, we have the following interesting showing:

New York	\$1,774,000,000
Massachusetts	917,000,000
Connecticut	316,000,000
Pennsylvania	223,700,000
New Jersey	117,396,000
Rhode Island	83,000,000
Maine	97,423,000
New Hampshire	96,343,000
Vermont	53,500,000
Delaware	12,260,000

These figures of aggregate deposits represent the deposits in mutual savings banks. In addition to these amounts there was a considerable amount of savings in other banks, which, in New Jersey, amounted to \$14,000,000; in Maryland, \$12,400,000, and in New Hampshire, a little more than \$7,275,000. If the total deposits in the stock savings banks and the mutual savings banks of Maryland be counted, this State has to the credit of its savings depositors \$109,511,000, as compared with \$102,000,000 for the fifteen Southern States.

Wherever savings banks do not exist, there is comparatively small encouragement to people to put by a little money from week to week, and they are therefore tempted to invest in all sorts of wild-cat

speculations, in town lots, often far out in the country, in mining schemes and similar unsafe propositions. If the amount of money which the South has literally thrown to the dogs during the last twenty-five years in such wild-cat operations could have been saved and accumulated in local banks, this section would be hundreds of millions of dollars richer, and this accumulated money would have helped all of the legitimate business operations of the South.

Probably no other section of this country has ever been so badly milked by unscrupulous promoters, who have taken from the widows and orphans, as well as from many who ought to have been better informed, millions and millions of dollars annually, which have gone into every imaginable kind of wild-cat scheme. Ministers and school teachers and physicians and other professional men, who could ill afford to lose a dollar, have been tempted by the promise of great profits to invest in every conceivable gambling, wild-cat mining stock or patent scheme which could be floated upon an unsuspecting public. The amount that the South has annually wasted in this way would run far into the millions, and probably into tens of millions. Had this money been kept at home and put into legitimate, well-managed savings banks, it would have been accumulating and steadily developing habits of thrift and economy.

In New England the savings banks have proved a source of great financial strength to that section. The enormous deposits, amounting to nearly \$1,000,000,000, in the savings banks of Massachusetts have furnished an ever liquid fund for investment in gilt-edged securities and for mortgage loans on properties, to the very great advantage of that State. In this day, when we are talking about the mobilization of armies and the mobilization and co-ordinating of industries, we should see the necessity of mobilizing the wealth of the South, in place of the present lack of system which scatters it to the winds by reason of the fact that the habit of depositing in savings banks has not been developed as in the Middle States and New England. Take Maryland, for instance, as that is the nearest State to the Central South, and here it is found that in mutual and stock savings banks there is an aggregate of over \$109,000,000, as against a considerably smaller amount for the balance of the South. This aggregate savings deposit in Maryland works, as it does in New England, to the benefit of the whole community. It represents the mobilizing of the financial strength of the men and women of small means, who, instead of frittering away their earnings in useless expenditures or wasting them in wild-cat speculations, have gone on year after year piling up a dollar here and a dollar there until the savings banks depositors in this State now own, in this liquid, tangible wealth at their command at any day when they choose to draw it, more than \$100,000,000.

The South should give heed to this situation. It cannot accumulate great wealth until it develops the habit of thrift and of savings. It cannot grow rich while it wastes its substance in the shape of its earnings and forgets to develop thrift and economy in laying by for the rainy day or for old age. It would be difficult for anyone to do the people of any community in the South greater material good than to encourage the habit of savings through bank deposits and then of safeguarding these savings in such a way that they will be absolutely beyond the possibility of any speculation or bad management on the part of bank officials.

"We sow an act, and reap a habit.

"We sow a habit, and reap a character.

"We sow a character, and reap a destiny."

This applies in material things as well as in ethics. Let the South learn to "sow a habit" of economy and savings, and it will eventually "reap a destiny" of vast accumulated wealth.

AGRICULTURAL IMPLEMENT INDUSTRY GROWING.

INCLUDED in the Census Bureau's summary of the agricultural-implement industry are statistics compiled from returns received from 722 estab-

lishments, 159 of them being in the South. The total value of the output of these establishments in 1914 was \$168,120,632, a gain of \$18,802,088, or 12.6 per cent. over the output of 854 establishments reported in 1909 valued at \$149,318,544.

The output of implements of cultivation increased in value from \$37,410,595 in 1909 to \$39,632,903 in 1914, or by 5.9 per cent., while there was a decline in the production of planters and seeders from \$12,268,156 in 1914, representing a decrease of .3 per cent., as compared with the 1909 output, \$12,306,207. Harvesting-implement production increased in value from \$35,250,840 in 1909 to \$40,561,472 in 1914, or by 15.1 per cent. Seed separators increased in value of output from \$11,588,986 in 1909 to \$13,986,184 in 1914, or by 20.7 per cent. There was an increase of 21.3 per cent. in value of the output of all other products, including parts for all classes of agricultural implements.

The greatest numerical increase in the output of the various kinds of implements between 1909 and 1914 were shown by grain harvesters, the production of which increased from 136,022 to 215,386, or by 58.3 per cent.; spring-tooth harrows from 114,341 to 188,247, or 64.6 per cent., and drills from 144,616 to 199,805, or 38.2 per cent.

The greatest percentages of increase, however, were shown for corn huskers and shredders, the production of which increased from 1298 in the earlier year to 4338 in the later, or by 234.2 per cent.; corn harvesters from 19,819 to 52,087, or 162.8 per cent., and bean harvesters 118.5 per cent.

Important increases were also shown for cotton planters and potato planters. The output of the former increased from 81,826 in 1909 to 101,256 in 1914, or by 23.7 per cent. and of the latter from 23,142 to 37,276, or 61.1 per cent.

STRONG COMMENDATION OF FEDERAL TRADE COMMISSION.

THE BALDWIN LOCOMOTIVE WORKS.
Philadelphia, Pa., June 16, 1916.

Editor *Manufacturers Record*:

I have read with close attention the statement of Mr. Jos. E. Davies, chairman of the Federal Trade Commission.

I believe that Mr. Davies and all of the members of the Commission are inspired by an earnest and sincere desire to benefit the business interests of our country, to put an end to any prejudice which has hitherto existed against the great business interests, and to direct legislation into lines which will promote rather than discourage prosperity. So inspired, I believe there is a great work possible for the Federal Trade Commission, for we have never before in the organization of our Government provided ourselves with such an agency for studying the conditions affecting business. This study includes not only the abuses which may grow out of excessive business competition and the necessities for more or less legislation at home, but it also makes possible a study of the conditions existing abroad which vitally affects our own industries, and with the knowledge of such foreign conditions it points the way for proper legislation by Congress. Not only do I believe that the Federal Trade Commission is of itself a most useful and necessary adjunct to our Government, but I rejoice that the President has, in his wisdom, made such an admirable selection of its personnel. Mr. Davies' letter is an impressive narrative of the Commission's achievements and purposes.

ALBA B. JOHNSON,
President.

THE 1915 COTTON CROP.

COTTON production in the United States in 1915, according to statistics compiled by the Census Bureau, was the smallest since 1909, amounting to 11,191,820, equivalent 500-pound bales, or nearly 5,000,000 bales, or more than 30 per cent. less than the 1914 crop.

Of the total for the country, Texas produced 3,227,480 bales, or more than one-fourth of the 1915 crop, followed by Georgia with 1,908,673 bales, or more than one-sixth of the total output in the United States. Other States producing large crops were South Carolina, with 1,133,919 bales; Alabama, 1,020,839 bales; Mississippi, 953,965 bales; Arkansas, 816,002 bales; North Carolina, 699,494 bales, and Oklahoma, 639,626 bales. Although cotton is grown in eighteen States, the combined product of four—Texas, Georgia, South Carolina and Alabama—represent almost two-thirds of the total crop of 1915.

Industrial Progress of Many American Cities

By HOWARD L. CLARK.

If the average rate of the percentage of increase in manufacturing capital and products for the 425 cities so far reported by the census for 1914 in comparison with 1909 should hold good as to the entire country, the total capital invested in manufacturing in 1914 was about \$23,000,000,000 and the value of products, in round figures, about \$25,000,000,000, or nearly two and a half times the total value of all the agricultural products, including crops and livestock, of the country at the present time.

These figures show the magnitude of the industrial interests of the country, but at the same time they indicate that between 1909 and 1914 there was a considerable decrease in the percentage of growth as compared with the rate of growth for the preceding five years. Between 1904 and 1909 the capital invested in manufacturing increased 45.4 per cent. and the value of products 39.7 per cent. The rate of increase shown by the 425 cities is 25.7 per cent. in capital invested and 18.7 per cent. in the value of products manufactured.

This lessened rate of growth of manufactures is due to the severe depression when the census of 1914 was compiled, for at that time manufacturing interests were at a comparatively low ebb and the capital invested and the value of the products necessarily were very much less than would be shown if a census could be taken at the present, when in so many industries abounding prosperity is the order of the day.

As recently stated in the MANUFACTURERS RECORD, the value of the output of the steel works and rolling mills of the United States, which was \$919,527,244 in 1914, will this year, by virtue of an increase of nearly 100 per cent. in output in iron and steel products and a very large increase in value, probably run to \$2,500,000,000. While all other industries would not show so large an increase in value as this, the statistics of the present year, if they were available, would show a much larger capital investment and output value than those of 1914.

On May 4 we published the statistics of the capital invested and the value of products of manufactures for the 99 Southern cities which up to that time had been reported by the census in comparison with 1909. Since then additional reports have been issued, making a total of 108 Southern cities. These 108 cities had an aggregate capital investment in manufacturing of \$1,339,987,000 in 1914, as compared with \$1,082,623,000 in 1909, showing a gain of \$257,364,000, or 23.8 per cent.

The value of the product of these factories increased from \$1,318,254,000 in 1909 to \$1,543,874,000 in 1914, a gain of \$225,620,000, or 17.1 per cent.

In order that our readers may have the opportunity of studying the statistics of factory growth throughout the entire country, we are giving a list of 317 cities thus far reported by the census in Northern and Western States in comparison with 1909 as to capital invested in manufacturing and the value of their products.

These figures indicate the trend of industrial affairs throughout the entire country. They cover some of the big cities and some of the small towns all the way from New England to the Pacific coast. Many of these cities show astonishing percentages of gain in capital and products. Ironwood, Mich., for example, leads with an increase of 379.6 per cent. in manufacturing capital and 110 per cent. in output, followed by Mason City, Iowa, with an increase of 373.2 per cent. in capital and 307 per cent. in the value of its output. Uniontown, Pa., made an increase of 176.7 per cent. in manufacturing capital, while Johnstown, in the same State, showed a small decrease. San Jose, Cal., gained over 250 per cent. in capital; Kokomo, Ind., increased its industrial capital by 147.4 per cent.; Long Beach, Cal., had an increase in capital of 143.5 per cent. and 217.7 per cent. in manufactured products; White Plains, N. Y., 141.5 per cent. increase in capital; Garfield, N. J., 100.9 per cent. increase in capital, and many other places showed an increase of 100 per cent.

There were, however, many towns, both in the East and West, in which there was a falling off in the capital invested in manufacturing. This condition is found in a number of New England cities, some in the Middle States and some in the central West and on the Pacific coast. In this list, Plymouth, Pa., has the unenviable position of showing the largest decrease in capital investment, which amounted to a decrease of 67.2 per cent. and a decrease of 29.5 per cent. in the value of its products. Other towns with a decrease in capital invested in industrial enterprises are: Bangor, Maine, 3 per cent.; Dover, N. H., 10.9 per cent.; Leavenworth, Kans., 1.9 per cent.; Muscatine, Iowa, 10.1 per cent.; Coffeyville, Kans., 10.6 per cent.; Eureka, Cal., 10 per cent.; Davenport, Iowa, 12.4 per cent.; Revere, Mass., 32.7 per cent.; Morris-town, N. J., 42.8 per cent.; Redlands, Cal., 39.4 per cent.; Pottstown, Pa., 38.2 per cent., and Hamilton, O., 11.1 per cent. Some of these towns which showed a decrease in capital were able to report a gain in the value of their products, such as East St. Louis, Ill., which, with a decrease of 9.1 per cent. in capital, reported a gain of 48.6 per cent. in products; Quincy, Mass., with a loss of 5 per cent. in manufacturing capital, showed a gain of 15.2 per cent. in products, and others, while some with increases in industrial capital had a decline in the value of their output.

The total manufacturing capital for 1914 in the 317 cities given in the accompanying list was \$6,035,379,000. This was a gain of 26.1 per cent., or \$1,251,049,000. The

gain in the value of products turned out by the manufactures in these cities was \$1,005,790,000, or 19.1 per cent., the total for 1914 being \$6,281,169,000, as compared with \$5,275,469,000 in 1909.

Notwithstanding the vastness of the industrial activities of other sections, the South, on the basis of 108 cities thus far reported by the census in comparison with figures for 1909, almost kept even step with the 317 cities of other sections of the country. In these Southern cities there was a gain in capital invested in factories of 23.8 per cent. and in the value of products of 17.1 per cent., slightly less in each case than the average net gain for the 317 cities of other sections.

The census has thus far reported on 11 Southern States in full and 17 States outside of the South. In this latter list there are several New England States and a number of Western and Pacific Coast States, but none of the larger manufacturing States, such as Pennsylvania, Ohio, Massachusetts and Illinois.

The total reported for the 11 Southern States was in capital \$2,170,375,000, or a gain of 21.7 per cent. over 1909, while the gain in the value of their combined manufactured products was 21.5 per cent.

In the 17 States outside of the South thus far reported, the gain in capital was 23.0 per cent., or a little more than the rate of increase in the South, and the gain in the value of products was 14.9 per cent., or considerably less than the percentage of increase in the South. It must, however, be borne in mind that these States are not as typical of the industrial progress of the North and West as the States given of the South are typical of the best industrial activities of that section.

A study of the statistics given as to manufactures in the accompanying list of towns and cities should prove interesting to every business man. It has not heretofore been possible to make any comparison between the growth of these various cities until the final census returns have appeared long after the figures had been compiled. No other publication has ever before undertaken to present such a list of cities covering the whole country in order that an intelligent study of what these various cities are doing may be possible.

SUMMARY OF MANUFACTURING CENSUS OF CITIES OUTSIDE OF THE SOUTH THUS FAR REPORTED BY THE CENSUS.

	Capital Invested, 1914.	1909.	Percent- age Increase.	Value of Products, 1914.	1909.	Percent- age Increase.
Aberdeen, Wash.	4,876,000	4,590,000	6.9	4,799,000	3,590,000	33.7
Adams, Mass.	7,119,000	8,019,000	-11.2	6,530,000	6,410,000	1.9
Adrian, Mich.	5,032,000	5,086,000	-1.1	5,442,000	6,085,000	-10.6
Akron, O.	110,134,000	58,216,000	89.2	122,292,000	73,158,000	67.2
Alameda, Cal.	3,737,000	3,002,000	24.5	2,794,000	2,554,000	9.4
Albany, N. Y.	26,683,000	26,276,000	1.5	25,289,000	22,826,000	10.8
Allentown, Pa.	26,716,000	21,569,000	23.9	33,918,000	28,263,000	20.1
Alliance, O.	8,665,000	7,212,000	20.1	7,175,000	6,135,000	17.0
Alpena, Mich.	4,712,000	4,598,000	2.5	4,102,000	3,964,000	3.5
Altoona, Pa.	13,794,000	16,094,000	-14.3	22,592,000	16,763,000	34.8
Amsterdam, N. Y.	22,645,000	18,162,000	24.7	22,475,000	22,449,000	0.1
Anderson, Ind.	11,767,000	10,728,000	9.6	12,789,000	13,765,000	-7.1
Ann Arbor, Mich.	2,888,000	1,760,000	64.1	2,603,000	1,896,000	39.5
Ansonia, Conn.	16,535,000	9,763,000	69.4	21,499,000	20,088,000	7.0
Arlington, Mass.	1,056,000	778,000	35.7	641,000	685,000	-7.8
Ashland, Wis.	3,463,000	2,494,000	38.9	1,837,000	2,748,000	-33.5
Ashtabula, O.	4,238,000	2,076,000	107.0	5,021,000	3,459,000	45.2
Atchison, Kan.	2,073,000	2,183,000	-5.0	3,899,000	4,405,000	-11.5
Attleboro, Mass.	15,656,000	14,305,000	9.4	13,947,000	15,160,000	-8.0
Augusta, Me.	5,069,000	3,414,000	48.5	4,918,000	4,662,000	5.5
Aurora, Ill.	14,866,000	11,427,000	30.1	10,739,000	10,954,000	-1.5
Bakersfield, Cal.	2,749,000	1,791,000	53.5	2,828,000	2,819,000	0.3
Bangor, Me.	3,459,000	3,565,000	-3.0	3,557,000	3,346,000	6.3
Batavia, N. Y.	7,847,000	5,697,000	37.7	5,340,000	4,401,000	21.3
Battle Creek, Mich.	19,833,000	19,176,000	3.7	23,248,000	20,174,000	15.2
Bay City, Mich.	10,618,000	10,299,000	3.2	11,119,000	10,294,000	8.0
Bayonne, N. J.	92,653,000	62,281,000	48.8	98,208,000	73,641,000	33.4
Beaver Falls, Pa.	9,481,000	7,503,000	26.4	7,967,000	6,400,000	24.4
Bellaire, O.	7,671,000	6,427,000	19.4	12,176,000	10,092,000	20.6
Belleville, Ill.	5,018,000	5,541,000	-9.4	5,739,000	4,615,000	24.4
Bellingham, Wash.	6,912,000	3,288,000	110.3	6,264,000	4,600,000	36.2
Beloit, Wis.	9,647,000	7,747,000	24.5	6,928,000	5,886,000	17.7
Berkeley, Cal.	5,814,000	3,465,000	67.8	7,321,000	4,435,000	65.1
Binghamton, N. Y.	18,237,000	14,214,000	28.3	18,360,000	17,114,000	7.3
Boone, Ia.	875,000	826,000	5.9	908,000	469,000	93.6
Boston, Mass.	214,735,000	175,182,000	22.6	284,802,000	227,457,000	19.9
Bridgeton, N. J.	5,820,000	3,302,000	76.3	4,936,000	4,071,000	21.2
Brockton, Mass.	28,809,000	18,978,000	51.8	51,259,000	45,972,000	11.5
Brookline, Mass.	1,123,000	617,000	82.0	659,000	532,000	23.9
Burlington, Ia.	7,307,000	7,033,000	3.9	8,158,000	8,443,000	-3.4
Butte, Mont.	2,393,000	1,899,000	26.0	2,907,000	2,464,000	18.0
Butler, Pa.	18,380,000	16,753,000	9.7	15,006,000	11,034,000	26.0
Calro, Ill.	3,474,000	4,554,000	-28.4	4,584,000	4,440,000	3.2
Cambridge, Mass.	48,999,000	37,929,000	29.2	57,484,000	44,227,000	30.0
Cambridge, O.	2,969,000	2,379,000	24.8	3,924,000	4,291,000	-8.6
Carbondale, Pa.	2,886,000	2,307,000	25.5	3,170,000	2,523,000	25.6
Carmegie, Pa.	2,202,000	2,253,000	-2.3	1,734,000	1,184,000	45.6
Cedar Rapids, Ia.	20,281,000	11,481,000	76.6	34,982,000	24,824,000	40.9
Chambersburg, Pa.	3,740,000	3,484,000	7.3	3,075,000	2,456,000	25.2
Champaign, Ill.	971,000	895,000	8.5	1,245,000	846,000	47.2
Chelsea, Mass.	12,419,000	11,021,000	12.7	16,971,000	17,002,000	-0.2
Chester, Pa.	25,148,000	23,928,000	5.1	21,021,000	19,373,000	8.5
Chicago Heights, Ill.	20,350,000	10,421,000	95.3	14,486,000	10,839,000	33.6
Chicopee, Mass.	23,501,000	14,803,000	58.8	25,869,000	19,219,000	50.2
Chillicothe, O.	2,905,000	2,364,000	22.9	4,083,000	4,345,000	-6.0

	Capital Invested, 1914.	1909.	Percent- age Increase.	Value of Products, 1914.	1909.	Percent- age Increase.		Capital Invested, 1914.	1909.	Percent- age Increase.	Value of Products, 1914.	1909.	Percent- age Increase.
Cincinnati, O.	157,468,000	149,896,000	5.1	210,708,000	192,516,000	9.4	Marietta, O.	3,405,000	3,275,000	4.0	4,129,000	3,215,000	28.4
Cleveland, O.	311,504,000	227,397,000	37.0	346,647,000	271,961,000	27.5	Marlboro, Mass.	3,156,000	3,378,000	-6.6	9,984,000	10,382,000	-3.9
Clinton, Mass.	8,575,000	7,607,000	12.7	6,735,000	7,845,000	-14.1	Marquette, Mich.	1,683,000	1,441,000	16.8	1,395,000	1,278,000	9.2
Clinton, Ia.	8,068,000	6,532,000	23.5	10,484,000	7,480,000	40.2	Marshalltown, Iowa	3,531,000	2,558,000	40.0	5,150,000	4,822,000	6.8
Coffeyville, Kans.	2,092,000	2,341,000	-10.6	3,788,000	3,832,000	-1.1	Marion, O.	9,699,000	7,864,000	23.3	6,385,000	5,667,000	12.7
Cohoes, N. Y.	14,649,000	12,451,000	17.7	11,706,000	13,518,000	-13.4	Mason City, Ia.	10,203,000	2,156,000	373.2	11,742,000	2,881,000	307.6
Colorado Springs, Col.	2,990,000	2,023,000	3.3	1,908,000	1,733,000	10.1	Massillon, O.	7,483,000	7,788,000	-3.9	5,293,000	4,788,000	10.5
Columbus, O.	52,098,000	48,747,000	6.9	57,608,000	49,032,000	17.5	Matttoon, Ill.	1,064,000	832,000	27.9	1,544,000	1,434,000	7.7
Columbia, Pa.	3,513,000	3,590,000	-2.1	3,341,000	4,807,000	-30.5	McKeesport, Pa.	42,482,000	43,433,000	-2.2	33,743,000	42,495,000	-20.6
Concord, N. H.	5,701,000	5,314,000	7.3	6,744,000	6,476,000	4.1	McKees Rocks, Pa.	10,886,000	9,210,000	18.2	7,894,000	9,582,000	-17.8
Connellsville, Pa.	3,246,000	3,275,000	-0.9	1,994,000	1,971,000	1.2	Meadville, Pa.	4,305,000	2,651,000	62.4	5,058,000	3,498,000	44.6
Corning, N. Y.	4,992,000	3,216,000	55.2	3,954,000	3,050,000	29.6	Medford, Mass.	2,369,000	1,556,000	48.4	2,619,000	2,045,000	28.1
Cortland, N. Y.	5,577,000	5,490,000	2.1	6,438,000	6,296,000	0.7	Merrose, Mass.	3,473,000	2,015,000	72.4	2,499,000	2,825,000	-11.5
Danbury, Conn.	7,689,000	7,786,000	-1.2	10,582,000	10,318,000	2.6	Menominee, Mich.	6,825,000	5,213,000	30.9	5,000,000	3,728,000	34.1
Davenport, Ia.	13,413,000	15,300,000	-12.4	17,173,000	18,802,000	-8.7	Michigan City, Ind.	16,499,000	8,859,000	86.2	15,120,000	8,261,000	83.0
Denver, Col.	44,679,000	42,215,000	5.8	46,982,000	46,925,000	0.1	Middletown, O.	23,974,000	10,564,000	126.9	21,787,000	16,517,000	31.9
Dover, N. H.	5,703,000	6,398,000	-10.9	5,682,000	6,370,000	-10.8	Middletown, Conn.	5,982,000	2,544,000	68.8	5,643,000	4,955,000	13.9
Dubuque, Pa.	2,396,000	2,333,000	41.3	2,385,000	1,753,000	36.6	Middletown, N. Y.	4,794,000	3,691,000	29.9	4,443,000	4,658,000	-4.6
Dubuque, Ia.	13,329,000	12,216,000	9.1	14,714,000	15,249,000	-3.5	Millford, Mass.	2,287,000	1,756,000	30.2	4,028,000	4,442,000	-9.3
Dunkirk, N. Y.	9,364,000	7,979,000	32.3	8,367,000	6,576,000	27.2	Millville, N. J.	4,161,000	3,578,000	16.3	4,644,000	4,182,000	11.0
East Chicago, Ind.	38,706,000	18,809,000	105.8	41,624,000	23,869,000	74.4	Moline, Ill.	34,179,000	26,101,000	30.9	19,925,000	20,664,000	-3.6
East Orange, N. J.	6,618,000	3,849,000	71.9	5,407,000	3,725,000	45.2	Montclair, N. J.	2,177,000	1,105,000	97.0	1,432,000	1,026,000	39.6
Easton, Pa.	9,452,000	7,687,000	23.0	10,357,000	6,915,000	49.8	Morristown, N. J.	542,000	948,000	-42.8	684,000	724,000	-5.5
East Liverpool, O.	6,593,000	7,988,000	-17.5	7,093,000	6,629,000	7.0	Mount Carmel, Pa.	809,000	435,000	86.0	1,280,000	785,000	63.1
East St. Louis, Ill.	28,322,000	31,157,000	-9.1	26,905,000	18,104,000	48.6	Mount Vernon, N. Y.	2,684,000	3,302,000	-16.2	3,167,000	3,376,000	-6.2
Eau Claire, Wis.	7,693,000	7,290,000	5.5	6,774,000	5,855,000	15.7	Muncie, Ind.	6,485,000	5,006,000	29.5	10,779,000	8,441,000	27.7
Elgin, Ill.	17,371,000	15,998,000	8.6	10,492,000	10,537,000	-0.4	Muscataine, Ia.	6,089,000	6,774,000	-10.1	5,899,000	6,166,000	-2.7
Elkhart, Ind.	9,511,000	5,418,000	75.5	8,649,000	6,835,000	26.5	Muskegon, Mich.	11,329,000	8,337,000	35.9	11,592,000	9,648,000	20.1
Ellwood, Ind.	4,624,000	4,572,000	1.1	8,199,000	8,379,000	-2.1	Nashua, N. H.	13,874,000	12,854,000	7.9	22,780,000	17,326,000	31.5
Elmira, N. Y.	15,759,000	10,830,000	45.5	12,597,000	8,067,000	56.2	Newark, O.	8,953,000	9,036,000	-0.9	9,277,000	7,851,000	18.2
Elyria, O.	9,486,000	7,324,000	29.5	8,792,000	8,065,000	9.0	Newark, N. J.	214,306,000	180,111,000	19.0	210,545,000	201,888,000	4.3
Eureka, Cal.	2,976,000	3,306,000	-10.0	2,480,000	3,012,000	-17.7	New Albany, Ind.	3,293,000	3,260,000	-2.0	3,236,000	3,223,000	-0.4
Everett, Mass.	26,409,000	22,905,000	15.3	13,219,000	8,747,000	51.1	New Bedford, Mass.	87,244,000	58,970,000	47.9	65,487,000	53,238,000	23.0
Fall River, Mass.	89,290,000	82,086,000	8.8	64,663,000	64,146,000	0.8	Newburyport, Mass.	5,973,000	4,900,000	21.1	1,736,000	1,689,000	4.0
Flint, Mich.	27,151,000	18,085,000	50.1	53,375,000	24,118,000	121.3	Newburgh, N. Y.	11,606,000	8,316,000	39.6	9,987,000	9,651,000	3.5
Fond du Lac, Wis.	6,353,000	6,803,000	-6.6	6,761,000	8,227,000	-17.8	New Brunswick, N. J.	16,251,000	11,189,000	45.2	14,514,000	10,005,000	45.1
Fort Scott, Kans.	892,000	626,000	42.5	1,580,000	1,010,000	56.4	New Castle, Pa.	26,872,000	27,058,000	-0.7	38,385,000	38,341,000	0.1
Fort Wayne, Ind.	31,167,000	23,346,000	53.2	30,205,000	23,687,000	27.5	New Haven, Conn.	65,746,000	51,933,000	26.5	57,752,000	50,889,000	13.5
Framingham, Mass.	9,255,000	7,770,000	19.5	8,727,000	6,917,000	26.2	New Rochelle, N. Y.	1,761,000	1,377,000	27.9	8,246,000	6,931,000	19.0
Fresno, Cal.	7,375,000	4,937,000	49.5	16,520,000	11,090,000	49.0	Newton, Mass.	5,581,000	5,669,000	-1.6	5,823,000	6,279,000	-7.3
Fulton, N. Y.	12,168,000	11,033,000	10.3	9,572,000	7,867,000	21.7	Niagara Falls, N. Y.	64,245,000	37,239,000	72.5	44,532,000	28,652,000	56.5
Galesburg, Ill.	2,488,000	2,454,000	1.4	3,192,000	2,919,000	9.4	Norristown, Pa.	9,173,000	6,984,000	31.3	8,421,000	7,325,000	15.0
Gardner, Mass.	13,534,000	10,273,000	31.7	7,450,000	6,485,000	14.9	North Adams, Mass.	13,089,000	15,943,000	-17.9	13,562,000	10,315,000	31.5
Gardfield, N. J.	16,083,000	8,006,000	100.9	16,113,000	8,894,000	81.2	Northampton, Mass.	11,060,000	7,908,000	38.3	8,581,000	6,999,000	22.6
Glens Falls, N. Y.	9,732,000	6,226,000	56.3	6,535,000	4,877,000	34.0	Norwood, O.	21,102,000	13,388,000	57.9	16,724,000	9,684,000	72.7
Gloucester, Mass.	7,110,000	5,693,000	24.9	8,534,000	7,753,000	10.1	Oakland, Cal.	36,411,000	19,113,000	90.5	28,522,000	22,343,000	27.7
Gloversville, N. Y.	11,598,000	11,969,000	-0.6	13,384,000	14,171,000	-5.6	Oak Park, Ill.	5,155,000	6,061,000	-14.9	1,555,000	1,118,000	39.1
Grand Rapids, Mich.	46,856,000	38,783,000	20.8	49,829,000	42,231,000	18.0	Ogden, Utah	5,382,000	2,224,000	131.6	6,014,000	3,713,000	62.0
Green Bay, Wis.	6,853,000	5,495,000	24.7	6,798,000	6,235,000	9.0	Ogdensburg, N. Y.	2,195,000	2,617,000	-16.1	3,401,000	4,948,000	-31.3
Greensburg, Pa.	1,039,000	803,000	29.4	1,282,000	687,000	101.2	Oil City, Pa.	6,514,000	3,344,000	94.8	4,872,000	2,955,000	64.9
Greenfield, Mass.	4,465,000	2,520,000	77.2	3,527,000	2,801,000	25.9	Oshkosh, Wis.	15,513,000	9,611,000	61.4	13,890,000	14,739,000	-5.8
Hamilton, O.	21,888,000	24,629,000	-11.1	16,877,000	18,184,000	-7.2	Ossining, N. Y.	2,229,000	2,063,000	8.0	1,120,000	1,329,000	-15.7
Hammond, Ind.	24,042,000	16,271,000	47.8	20,584,000	15,590,000	32.1	Oswego, N. Y.	11,774,000	11,249,000	4.7	12,650,000	10,413,000	21.5
Harrisburg, Pa.	21,650,000	22,925,000	-5.6	18,872,000	22,665,000	-16.7	Passaic, N. J.	48,659,000	42,115,000	15.5	53,208,000	40,733,000	30.8
Harrison, N. J.	29,212,000	21,247,000	37.5	17,961,000	13,770,000	30.4	Parsons, Kan.	1,514,000	1,530,000	-1.0	2,372,000	1,626,000	45.9
Haverhill, Mass.	18,414,000	14,786,000	24.5	42,409,000	35,377,000	19.9	Pasadena, Cal.	1,601,000	1,347,000	18.8	1,974,000	1,724,000	14.4
Hazleton, Pa.	5,508,000	5,309,000	3.7	5,594,000	4,707,000	18.8	Peabody, Mass.	21,281,000	15,804,000	34.7	18,442,000	15,549,000	18.6
Hoboken, N. J.	19,771,000	19,013,000	4.0	23,461,000	20,286,000	15.7	Peekskill, N. Y.	3,810,000	3,813,000	-0.1	8,301,000	7,940,000	4.5
Holland, Mich.	7,744,000	5,883,000	31.6	8,654,000	5,802,000	49.7	Peoria, Ill.	32,509,000	21,945,000	30.3	64,689,000	63,061,000	2.6
Homestead, Pa.	1,581,000	1,273,000	24.2	1,069,000	689,000	62.2	Perth Amboy, N. J.	61,814,000	43,386,000	42.4	148,960,000	101,883,000	46.2
Hornell, N. Y.	4,802,000	2,866,000	67.6	4,848,000	3,648,000	32.9	Peru, Ind.	1,790,000	1,654,000	7.6	1,529,000	1,097,000	39.4
Hudson, N. Y.	3,219,000	2,774,000	16.0	3,737,000	3,507,000	6.6	Phoenixville, Pa.	8,698,000	8,765,000	-0.8	6,239,000	5,876,000	6.2
Hutchinson, Kans.	3,277,000	2,270,000	44.3	5,609,000	3,614,000	55.2	Phillipsburg, N. J.	15,421,000	9,764,000	57.9	11,329,000	9,150,000	23.8
Huntington, Ind.	2,746,000	1,302,000	110.9	2,791,000	2,228,000	25.3	Piqua, O.	6,717,000	5,444,000	23.4	7,987,000	6,931,000	15.2
Iowa City, Ia.	1,576,000	746,000	111.3	1,333,000	805,000	65.6	Pittsburgh, Pa.	309,217,000	283,059,000	9.2	246,694,000	243,392,000	1.4
Ironwood, Mich.	1,458,000	304,000	379.6	738,000	377,000	110.3	Pittsburg, Kans.	1,801,000	1,786,000	0.8	2,169,000	1,817,000	19.4
Ironton, O.	5,255,000	4,980,000	5.2	4,696,000	7,118,000	-34.4	Pittsboro, Pa.	2,324,000	2,337,000	-0.6	1,900,000	1,969,000	-3.5
Irrvington, N. J.	2,519,000	1,466,000	79.2	7,350,000	3,018,000	143.5	Plymouth, Pa.	832,000	2,544,000	-67.2	831,000	1,179,000	-29.5
Ithaca, N. Y.	3,400,000	2,978,000	14.2	2,244,000	1,920,000	16.9	Plymouth, Mass.	11,771,000	10,760,000	9.4	13,905,000	11,618,000	19.7
Jackson, Mich.	14,056,000	9,069,000	55.0	16,810,000	13,984,000	20.2	Pomona, Cal.	1,192,000	629,000	89.5	825,000	559,000	47.6
Jacksonville, Ill													

Percent- age Increase.		Capital Invested, 1914.	1909.	Percent- age Increase.	Value of Products, 1914.	1909.	Percent- age Increase.		Capital Invested, 1914.	1909.	Percent- age Increase.	Value of Products, 1914.	1909.	Percent- age Increase.
28.4	Springfield, Mass.....	45,753,000	28,658,000	59.7	44,429,000	31,773,000	39.8	Warren, Pa.....	7,793,000	5,796,000	34.5	8,611,000	5,744,000	49.9
-3.8	Stillwater, Minn.....	\$2,569,000	\$3,277,000	-21.6	\$1,876,000	\$2,685,000	*-30.1	Waterbury, Conn.....	48,921,000	44,653,000	9.6	50,659,000	50,350,000	0.6
9.2	Steuenville, O.....	19,387,000	18,424,000	5.2	16,969,000	21,187,000	-20.9	Waterloo, Ia.....	14,115,000	7,581,000	86.2	14,126,000	8,999,000	57.0
6.8	Stockton, Cal.....	7,762,000	8,144,000	-4.7	11,293,000	11,470,000	-1.5	Watertown, Mass.....	10,943,000	7,230,000	51.6	14,764,000	11,546,000	27.9
12.7	St. Paul, Minn.....	76,010,000	69,467,000	25.7	68,682,000	58,990,000	16.4	Watertown, N. Y.....	17,255,000	18,662,000	-7.5	9,284,000	8,527,000	8.9
307.6	Streator, Ill.....	6,993,000	4,588,000	52.4	3,887,000	2,137,000	81.9	Watervliet, N. Y.....	1,659,000	1,423,000	16.4	1,612,000	1,669,000	-3.4
10.5	Sunbury, Pa.....	5,697,000	4,768,000	19.5	5,116,000	4,450,000	15.0	Waukegan, Ill.....	16,010,000	16,535,000	-3.2	12,439,000	19,541,000	-36.3
7.7	Superior, Wis.....	7,050,000	6,028,000	17.0	11,663,000	6,574,000	77.4	Webster, Mass.....	6,766,000	8,527,000	-24.2	9,234,000	10,027,000	-7.9
-20.6	Tacoma, Wash.....	28,287,000	23,482,000	20.5	27,708,000	24,462,000	13.3	West Chester, Pa.....	4,149,000	2,489,000	66.7	2,065,000	2,146,000	-2.8
-17.6	Taunton, Mass.....	17,693,000	16,504,000	7.3	15,886,000	15,380,000	3.3	West New York, N. J..	8,547,000	4,163,000	105.3	13,961,000	9,274,000	50.5
44.6	Tiffin, O.....	5,314,000	3,727,000	42.6	4,996,000	3,254,000	53.5	Weymouth, Mass.....	7,602,000	5,504,000	38.1	8,251,000	6,627,000	24.5
28.1	Toledo, O.....	91,101,000	58,319,000	56.2	115,049,000	61,230,000	87.9	White Plains, N. Y.....	5,090,000	2,095,000	141.5	990,000	816,000	21.3
-11.5	Topeka, Kans.....	14,186,000	10,748,000	32.0	19,742,000	17,821,000	10.8	Williamsport, Pa.....	17,649,000	13,953,000	26.5	15,751,000	13,202,000	19.3
34.1	Traverse City, Mich....	1,986,000	1,568,000	1.4	2,251,000	2,289,000	-1.7	Williamsville, Conn.....	12,005,000	9,919,000	21.0	9,564,000	6,733,000	42.0
53.0	Trinidad, Col.....	1,394,000	869,000	60.4	846,000	814,000	3.9	Wilkes-Barre, Pa.....	15,987,000	16,011,000	18.6	16,669,000	13,526,000	23.2
31.9	Troy, N. Y.....	42,380,000	39,975,000	6.0	39,930,000	39,293,000	1.6	Wilkesburg, Pa.....	500,000	535,000	4.7	572,000	538,000	6.3
13.9	Uniontown, Pa.....	4,696,000	1,686,000	176.7	2,237,000	1,347,000	66.1	Winona, Minn.....	12,013,000	7,878,000	52.5	14,304,000	11,198,000	27.7
-4.6	Utica, N. Y.....	30,762,000	27,736,000	10.7	30,480,000	31,199,000	-2.3	Woburn, Mass.....	9,772,000	8,405,000	16.3	5,518,000	5,408,000	2.0
-9.3	Vallejo, Cal.....	1,667,000	1,559,000	6.9	3,072,000	1,896,000	62.0	Worcester, Mass.....	79,243,000	64,639,000	22.6	82,829,000	77,148,000	7.4
11.0	Vincennes, Ind.....	3,533,000	3,560,000	-0.6	5,233,000	4,234,000	23.6	York, Pa.....	29,328,000	21,407,000	37.0	21,969,000	17,650,000	24.5
-3.6	Wakefield, Mass.....	4,205,000	3,864,000	8.8	6,058,000	5,527,000	9.6	Zanesville, O.....	5,862,000	5,486,000	6.9	8,300,000	8,020,000	3.5
39.6	Walla Walla, Wash.....	2,426,000	2,336,000	3.8	2,015,000	2,317,000	-13.0							
-5.5	Waltham, Mass.....	22,292,000	12,871,000	73.2	19,237,000	7,514,000	31.0	Total.....	\$6,035,379,000	\$4,784,330,000	26.1	\$6,281,199,000	\$5,275,409,000	19.1
63.1	Warren, O.....	8,550,000	4,511,000	89.5	10,400,000	5,988,000	73.7	(-) Decrease.						

Southern Life Insurance: Its Strength and Importance

ROBERT F. MOORE, Agency Secretary Southern States Life Insurance Co., Atlanta.

An idea seems to have been spread abroad, particularly throughout the Southern States, that no life insurance company which was organized in the South has ever made a success, and that failures of life insurance companies is confined to the South.

This is very far from being correct, for while it cannot be denied that there have been many instances of lack of success on the part of life insurance organizations during the last 100 years, the record, so far as it concerns the South, does not by any means show that this unfortunate condition has been confined to that section of the country.

From the following analysis of companies which have gone out of business it will be seen that, while the States comprising the southern portion of the country are responsible for 72 companies which have either insured, retired from business or failed, the other sections of the country show 216, or just three times as many.

The following is a list giving the number of companies in various States which have failed to make good since 1813:

Southern States.		Eastern and Western States.	
Louisiana.....	10	Ohio.....	16
North Carolina.....	9	Connecticut.....	10
Kentucky.....	8	Minnesota.....	5
Tennessee.....	8	New York.....	52
Texas.....	8	Iowa.....	19
Georgia.....	6	Indiana.....	15
Alabama.....	5	Pennsylvania.....	20
Virginia.....	5	Utah.....	1
Arkansas.....	3	Rhode Island.....	3
Maryland.....	3	New Jersey.....	13
Oklahoma.....	2	West Virginia.....	2
Florida.....	1	Missouri.....	15
South Carolina.....	3	Vermont.....	1
Mississippi.....	1	New Hampshire.....	1
(14).....	72	Massachusetts.....	2
		Delaware.....	5
		Kansas.....	4
		California.....	4
		Illinois.....	26
		Michigan.....	3
		Washington, D. C.....	1
		Washington.....	2
		Colorado.....	2
		Arizona.....	1
		Oklahoma.....	1
		Nebraska.....	1
		(26).....	216

New York State, the home of some of the most successful Eastern life insurance companies, leads the list, with 52; Illinois in the West follows, with 26, and then comes Pennsylvania, 20; Ohio, 16; Indiana and Missouri, 15 each; New Jersey, 13; Connecticut and Iowa, 10 each, and the other States varying from 1 to 5.

In the Southern States, Louisiana comes first, with 10; North Carolina, 9; Kentucky, Tennessee and Texas, 8 each; Georgia, 6, and the remaining States 1 to 5.

In the East and West 121 of these companies, or 55 per cent., were able to reinsure their risks in other companies; 50 of them, or 25 per cent., failed outright, while 45, or 20 per cent., retired from business; whereas in the South 45 companies, or 62½ per cent., reinsured their risks; 18, or 25 per cent., failed entirely, and 9, or 12½ per cent., retired from business.

The foregoing figures show that the experience of the South has been much better than that of the rest of the country in regard to companies which have not made good.

In further confutation of the idea that the establishment of a Southern life insurance company is not possible, it is only necessary to point out that on January 1, 1915, from the last available figures as published by the Spectator Company of New York, taken from the sworn published statements of the various companies to the insurance departments, there were 59 companies of Southern organization, with insurance in force amounting to \$697,151,607, whose combined assets amounted to \$72,402,962, some of which companies have been doing business since 1864, 1870 and 1871.

In making any comparison between the results accomplished by companies organized in the South with those of other companies throughout the remainder of the country, it must be realized that the Southern organizations are for the most part of comparatively recent origin, and that the average of the aggregate of years during which these 59 companies have been in existence is only nine.

Of the companies organized outside of the Southern States, there are 92 which have carried on business for nine years or more. Compared with the figures given above of Southern life insurance companies, the aggregate of the amount of business which these 92 companies had in force at the end of their ninth year was, according to the figures published by the Spectator Company, \$265,711,756, while the combined assets of such companies at the same period of their existence were \$39,353,983. Such a comparison cannot be otherwise than most satisfactory to those who are believers in the possibilities for Southern insurance companies.

Failure of success of any business organization, whether of life insurance or of any other industry, is not governed by geographical location, but can almost invariably be traced to some fundamental cause, such as poor judgment, unsound principles, undue expense, extravagance or improper administration expenses.

The keynote of the whole situation with regard to the successful carrying on of the business of a life insurance company was struck by one of the Southern insurance commissioners in a report made to his State some years ago, when he said: "The size of a company does not add to the safety of it from the policy-holders' standpoint, and, from the experience of the past, does not give him insurance at any lower cost. All depends upon the management."

Honesty and integrity of management is absolutely necessary to the successful building up of any business institution, and more particularly of a life insurance company.

The records of numbers of companies, including those in the South, which were established in the past, are monuments to the integrity and business acumen of their founders, and, given similar integrity and business-

like methods, no satisfactory reason can be deduced why the companies of more recent origin should not prove equally successful, more particularly in view of the fact that the safeguards which are thrown around the business of life insurance in the interests of policyholders are far greater now than they were half a century or more ago.

These records refer to those companies only known as Old Line or Legal Reserve companies, and do not in any way include assessment companies or fraternal societies.

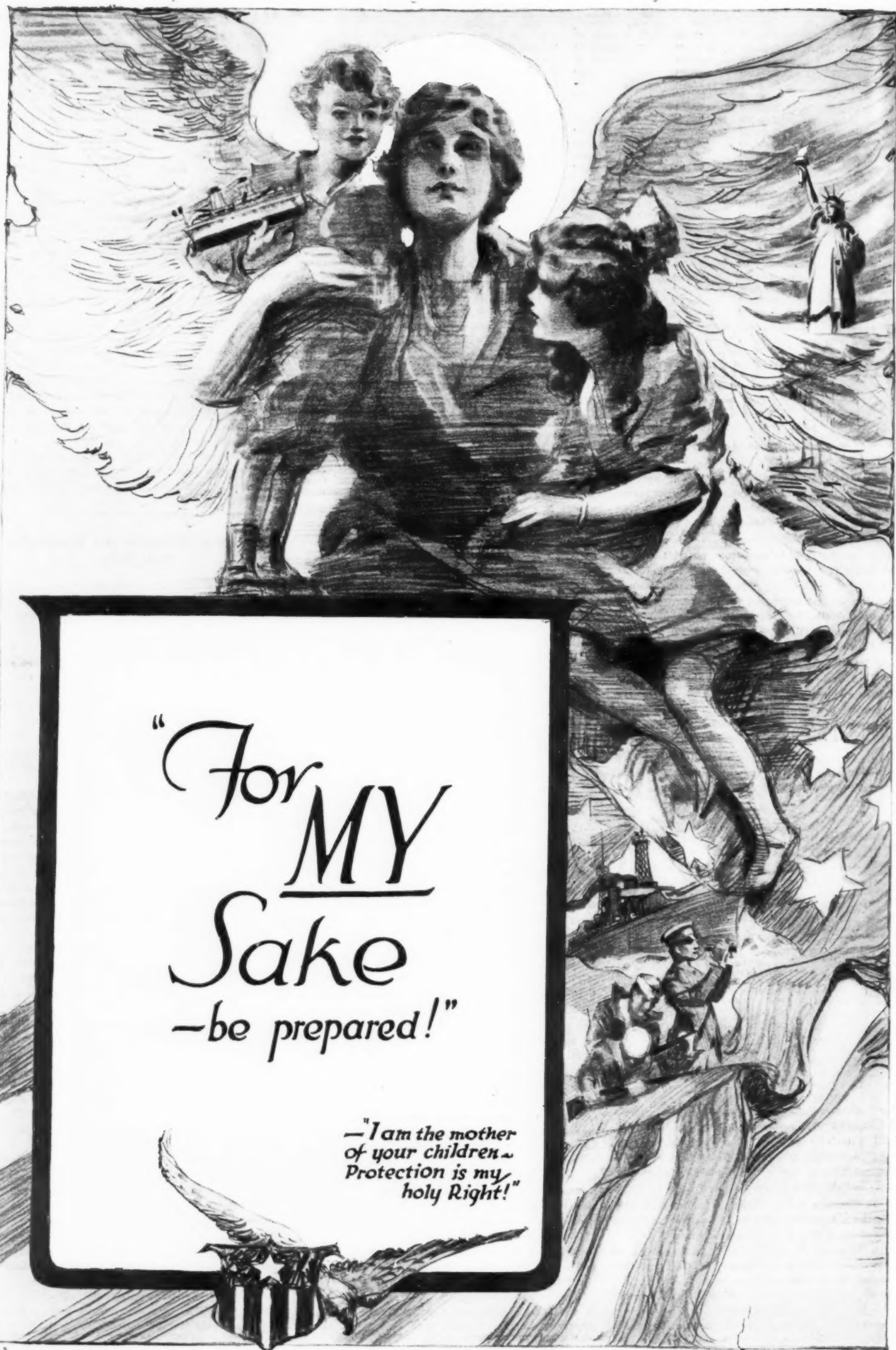
Shipbuilding Activities and Possibilities at Gulf Ports.

Shipbuilding continues to expand at Southern ports, although not yet as rapidly as the situation would justify. The Leader of Orange, Tex., gives some interesting particulars regarding shipbuilding at that point, and reports that on Saturday last Capt. Frederick W. Swails made contracts for two more large schooners for the lumber-carrying trade. The larger of these vessels will be a five-master, a duplicate of the ship now on the stocks at Swails. The other will be a four-master. The Leader quotes Mr. D. R. MacInnis, manager of the interests for which these boats are being built, as stating that six ships would be built or contracted for at that point within six months. About 150 men will be employed at this yard.

Mobile is making much progress in the shipbuilding work, and the Register of that city states that \$500,000 will be expended there this summer in such work. As previously reported in the MANUFACTURERS RECORD, the big iron ferry Winchell, formerly in New Orleans harbor, is to be converted into a first-class ocean-going oil barge, and the Gulf City Boiler Works have a contract on this job amounting to \$129,000. The Mexican tank steamship San Christobal, recently burned at a Mexican port, is to be brought to Mobile and rebuilt at a cost of about \$100,000 or over. The hull of the Launberger was expected to leave Havana last week for Mobile via New Orleans to be reconstructed into a big bark or four-masted schooner. This boat was abandoned off the Cuban coast some years ago. It was bought and temporary repairs were made, so that she would be seaworthy enough to be towed across the Gulf. A cargo of sugar was secured for shipment to New Orleans to pay the towing and other expenses, and from New Orleans the boat is to be towed to Mobile and will be reconstructed at a cost of about \$50,000. Another vessel is bound from Havana to Mobile for repairs after having been dismasted some months ago off the Mexican coast.

These indications of activity at Orange and at Mobile show how the ship-repairing and shipbuilding interests in the South are beginning to take advantage of the present opportunity.

It is most important that at the present time, when there is a world scramble for ships of all sizes and all classes, that the shipbuilding industry should receive impetus in the South. Along the Gulf and South Atlantic ports efforts should be made by shippers, by capitalists and by existing small yards to develop the shipbuilding interests in order that in such a favorable period as this the foundation may be laid for great shipbuilding activities in the future.



"For MY
Sake
—be prepared!"

—*"I am the mother
of your children—
Protection is my
holy Right!"*





"FOR MY SAKE—be prepared!"

I AM the mother of your children. Protection is my holy Right. Lest sudden death and great sorrow come to me, see to it that my home is guarded against invasion.

In my woman arms I hold YOUR babies—a future generation, still in swaddling clothes. For THEM I bid you fare forth. See to it that no man may cross the threshold of this shrine, with safety to himself.

Home have I built for you, from the warm waters of California's golden shore, to that thin thread of white, which Concrete's strong arm spun across the Keys.

I have put Love and Life and children in it, and I have set flowers to blooming at the gateway. You must stand at this great United portal, ready to defend it * * * facing the World, if needs be, in an hour of dire stress.

For, mark you, Man of mine, History is black with the unstable moods of Men—its pages run red with primeval blood. In their hours of greatest Peace they have balanced on the brink of War!

"Love one another" I have taught your children—sent them to prayer, with God in their baby hearts * * * unclasped your boy's hand from his toy sword and placed it tenderly on the Mother breast, where the sweetest of all passions are fought and conquered * * * but the fixed rules of immutable Law—the Law of Life itself * * * shall keep the camp fires of Washington alight and the musket of your honorable Forefathers ready, above the hearth.

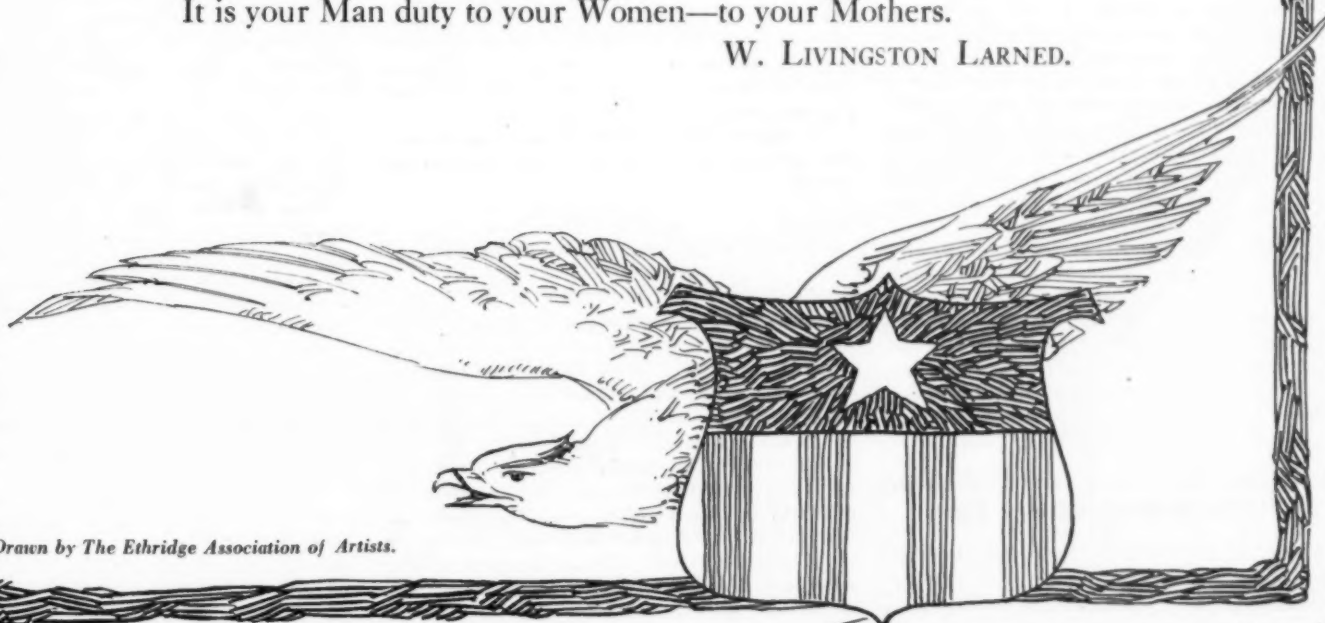
I come to you, with the soft coo of baby lips, still fresh in memory—you must protect us—you must * * * you MUST * * * have at command the strength to conquer those who conquer * * * to beat back the unknown at my gate—to live, unarmed in Thought, but Armed in strength when dire occasion calls.

Sound your voice into the silent places of your nation—call to hamlet and great city * * * light once more the fires of Patriotism on every human altar, until, in the dim mystery of their plumed smoke, we may see America, head held high, shoulders back, an Angel in Armor, Prepared for Peace and War alike.

In the name of all Motherhood, I bid you do this.

It is your Man duty to your Women—to your Mothers.

W. LIVINGSTON LARNED.



Drawn by The Ethridge Association of Artists.

News and Views from Our Readers

Industrial and Political Matters as Viewed by Mayor of Nashville.

ROBERT EWING, Mayor, Nashville, Tenn.

On one or two occasions I remember to have heard President Wilson express his strong appreciation for the patriotic service you were rendering through the MANUFACTURERS RECORD in attracting the attention of the world to the industrial opportunities existing in the South.

I therefore feel sure that the advocacy by the MANUFACTURERS RECORD of the proposed location of this nitrate plant at the Muscle Shoals and also anything additional you may express to him personally when you chance to meet him will prove of very great help. If this site is not chosen it will be, in my opinion, a most unfortunate failure on the part of the general Government to avail itself of what seems to me to be almost a God-given site for a great national purpose.

I earnestly hope in this national matter and others of very great commercial significance, not only to the South but to the country at large, that the President in his keenness of vision will see the wisdom of taking the wind out of the sails of the Republican ship and show that the Democratic party can wisely legislate in such matters. I believe the President is brave enough to look at the question in a purely businesslike way and determine the matter of suitability for the Government just as a great manufacturer would do in a like case.

This simply means a full consideration of every advantage and disadvantage in comparison with any other site existing in the country. By that we will abide.

A very active committee, consisting of very prominent and well-informed men from all of the surrounding cities, has been appointed by the president of our Commercial Club. This committee is now hard at work. Col. A. M. Shook is chairman. You may remember that Colonel Shook, acting in conjunction with Mr. James C. Warner and Nathaniel Baxter, Jr., both former presidents of the Tennessee Coal, Iron & Railroad Co. and both of whom are now dead, was the first to demonstrate at Chattanooga through operation of the old Southern Iron Co. the perfect possibility of making the very finest kind of steel out of Southern ores by the open-hearth process of manufacture. For over 30 years he has made a close study of all of the industrial advantages of that general locality, and he is thoroughly up on all of these. He is a man of wealth and public spirit, and can make very plain to anyone not only the good sense of locating this nitrate plant at the Muscle Shoals site, but the easy feasibility of establishing and successfully operating at Birmingham a plant for making all kinds of steel and steel articles required by the Government in time of war. I think we were both persuaded at the time that Mr. Harriman's purchase of 150,000 tons of steel rails from Birmingham was the real and controlling reason why the United States Steel Co. deemed it advisable to purchase that property. I am not lamenting the purchase by that company, because capital, which could not be had elsewhere, had to be obtained, if only for strong demonstration purposes.

An equally successful demonstration with regard to nitrate will follow the erection of the plant at Muscle Shoals. I think this great company is doing a great thing in utilizing the by-products of coal, and that at no distant date this country will feel the beneficial effects of that work in the price of dyestuffs and other chemicals.

Nashville is today engaged in making all kinds of hosiery and shipping the same to South American countries. Other industries operating here are reaching out for those great markets. I believe the time is not far distant when this section will fully establish and declare its commercial independence in a thousand important particulars. Therein lies the true road to deserved wealth.

The Hustling Activities of Fort Smith—The Spirit That Builds in Evidence There.

GEORGE SENDEL, Secretary Business Men's Club, Fort Smith, Ark.

Your most excellent publication tells the story every week of the South's splendid advancement to the thousands of readers who look to your publication for indus-

trial and agricultural inspiration. We must tell you what we are doing in this part of Dixie in developing the South's resources.

We appreciate the fact that Arkansas has not been looked upon as an industrial State, but that does not mean that the whole State comes under that classification. Fort Smith is on the western border of Arkansas, adjoining the eastern border of Oklahoma, in the very heart of this Southwest empire.

It may surprise many readers to know that we manufacture 15,000 farm wagons every year in Fort Smith; that we have the largest sorghum-syrup plant in the world; that we are building the largest smelters in the twin States; that we manufacture more furniture than any city of like size south of Grand Rapids, Mich.; that we make bar iron and steel.

We have the largest deposit of smokeless coal in the South, and have recently developed one of the most extensive gas fields in the United States. The natural gas and the smokeless coal are attracting manufacturers to our city. We not only offer them cheap fuel, but splendid railroad facilities in every direction.

We are building a splendid public highway through the State from the Missouri line to the Louisiana line. This highway is in course of construction, and will need road-building machinery, concrete mixers and bridges.

The development spirit is uppermost in the minds of our people. We are determined to make this section of the great Southwest the greatest industrial and commercial center of the entire South.

We have a city of 32,500 population, growing by leaps and bounds. We have 100 miles of paved streets, a municipally-owned million-dollar water plant, modern sewer system, and we will supply natural gas for domestic use at 15 cents per thousand feet.

The natural gas field is very extensive, and it is believed that oil will be found any day. Fifteen drills are pounding away day and night, bringing more natural gas to the surface in drilling for oil.

We are not writing this to boast, but just to tell you that we are one of the units that is making the South industrially great. Agriculturally speaking, we are in the very front of diversified agriculture, diversification of crops being the rule with us and not the exception.

Our climatic conditions enable the farmer to raise two crops of Irish potatoes on the same land every year. Some lands produce three crops every year. We are in the heart of the fruit belt made famous by the big red apple and the Elberta peach.

The splendid public school system of our city attracts many people to Fort Smith. Our high-school building cost \$500,000.

The jobbing interests of Fort Smith are conceded to be the largest of any city of like size in the United States, made possible by the splendid railroad facilities of our city.

This briefly tells the story of one city in Arkansas which is doing its part in developing the natural resources of the Southwest. Many of your manufacturers no doubt will be pleased to learn of this wonderful development of this wonder city on the western border of Arkansas, the State that is least understood and most abused, but the best State in the Union.

We raise our voice in behalf of our section as others have done through the columns of your splendid publication.

Views of an Appreciative Subscriber.

H. H. WHITE, Sales Engineer, Atlanta, Ga.

Business in the South has been very dull and collections worse, but I believe a change for the better has come. This section is behind the North in feeling the change, but this is always so, and in one way obviously so due to monetary and labor conditions. In time, however, I believe this will be changed.

I find that in my business I cannot afford to be without your paper if I desire to keep in touch with conditions and building progress, and for an advertising medium I believe your paper is the best. For that reason I have recommended that the concern I represent advertise in your journal in preference to others of like nature, for I know your paper is the one most read by the greatest number of people.

I have been greatly interested in your articles on

preparedness and the able manner in which you have come back (excuse the slang) at the unfortunate Americans (?) who apparently believe in peace at any price. Keep the good work up.

Mineral Potentialities of Appalachian Range.

CHARLES A. WELLER, Virgilina, Va.

In your publication of June 1 I was very much impressed with the statement of Mr. Wm. McGowan, geologist, Bristol, Tenn., with reference to the mineral deposits in the Appalachian Range. It has been an unsolved problem to me why this section has not long ago had the attention of investors that the section merits, as there is no part of our country with more diversified natural resources of commercial quantities and of values far in excess of many sections where great works of developments and operations are now being carried on.

As a member of the executive department of mines and minerals of the National Conservation Exposition, and as the chairman of the committee on ores, it has been my province to give a close investigation and study of the Appalachian region. That minerals do exist in commercial quantities is evidenced by a few examples where brains and capital have proven them, and by the employment of modern methods of extraction.

As a marked example, I would cite the Ducktown basin, which for many years laid dormant, as a copper district, but which now has one of the largest operations east of the Rocky Mountains. Of more recent development and operation is the Mascot zinc mine and mill, near Knoxville, Tenn., one of the largest operations of its kind in this country, producing a product that ranks at a premium in commerce, the spelter from these ores commanding an advanced price because of the low impurities in the ore. To my certain knowledge this zinc district was known and permitted to lay idle for more than 25 years.

Within 150 miles of tidewater, and within a night's ride of New York, Philadelphia and Baltimore, is a copper belt known for 18 miles in length, and from one and a half to two miles in width. Like other sections of the South, this wonderful section, right up against the markets, cheap labor, fuel and transportation, with an ideal climate, as compared with the West, has been lying idle for years, notwithstanding the fact that some of the best technical men of the country a few years ago passed favorably upon the district, both as to the permanency of the ore bodies and quality of the ores.

Prior to 1907, the year of the panic, considerable development work was carried on, beginning at a point nine miles north of the town of Virgilina, in Virginia, to nine miles south in North Carolina. Shafts were sunk throughout this distance in depths from a few feet to 450 feet, showing copper-bearing rock without a single exception, and records show that many thousands of tons of high-grade hand-picked ore were shipped from these properties. The record of one mine shows ore shipments in excess of \$1,000,000 in value. There were some attempts made to mill these ores, but they proved failures because of the lack of classification and employment of proper methods for the treatment of the ores. This can easily be seen today by an inspection of the plants still in existence and the sampling of the dumps.

When the slump came in the price of copper from around 20 cents to 10 cents per pound, making it impossible to ship the raw ores from this district, because of transportation and treatment costs at that time, everything in the district closed down and has been lying dormant ever since.

The writer, in connection with the work of the National Conservation Exposition, became acquainted with the Virgilina district, and for the past two years has been making investigations as to the best modern methods for the treatment of these ores. Various processes have been tried out with large commercial samples, consisting of oil flotation, electrostatic separation, sulphuric acid leaching and wet concentration. Most satisfactory results were obtained from these tests, showing recoveries from 85 per cent. to as high as 95 per cent. at very low costs. Because of the present low cost of labor, the treatment cost is lower than any operating section of the country. The cost was arrived at by analyzing the cost in other sections and applying

them to the Virgilina district on the average wage scale and cost of fuel. This has also been demonstrated, and is now being demonstrated by actual operations in a plant the writer has lately completed and put in operation at one of these mines, which is open for inspection at any time to anyone who might be interested in this or any other section of the South. [In another letter Mr. Weller, referring to this development, says: "The mine referred to as now being in operation is owned by the Seaboard Copper Mining Co., whose plant is near this place, lately completed, using the James ore concentrating process of wet concentration. This consists of automatic jigs, sand and slime tables, with a new vibrapact wet screen and classification. The concentrating end of the mill has a capacity of 100 tons per day of ore, but owing to the delay in the delivery of new crushing rolls and some other equipment, the mill is only running on one shift of about 25 tons per day of 10 hours. The recovery is most satisfactory, producing a high concentrate, especially from the jigs, which shows by assay 61.60 per cent. copper, slimes 46.60 per cent. and tables around 35 per cent. The first shipment of concentrates has been made to United States Metals Refining Co., Chrome, N. J."]

This field offers new attractive opportunities in the late discoveries of large bodies of disseminated glance and bornite copper, in metamorphosed schists and porphyries, where proven averages show from 2 to 2.5 per cent. copper, with some gold and silver values. These ores have been successfully treated by oil flotation, results from which are available for inspection at any time.

In my opinion, no more attractive opportunity is opened to large or small investor than the Virgilina district, which, with the available ore and developed properties, can soon demonstrate the fact that the South only awaits the miner and the quarryman, with modern methods, to yield its riches from the treasure-houses nature has builded in these mountains.

The Business Stake in Restoring Railway Credit.

W. B. BROWN, Durand Steel Locker Co., Chicago, Ill.

Whatever may have been the effect of past agitation against the railroads—and undoubtedly the controversy has seriously injured every national interest—what must strike close observers now is the radical change in the atmosphere.

Anyone who has read the debates in Congress and colloquies before committees of Congress during the present session where railway measures have been under review must have been struck with the anxiety shown by members of Congress, as well as by other Federal officers, to make manifest a thoroughgoing solicitude for the welfare of the railways. Investigation and regulation of railways is no longer a plank on which any man can force his election to any Legislature, either National or State.

In this situation, under normal circumstances, defects developed as the system of regulation of railways has grown up could win adequate attention from Congress and a reasonably speedy correction of these defects would be assured. Unhappily, this is not a normal time. Congressmen are beset with more problems, and more distracting pressing problems, than they can hope to deal with thoroughly. Not to speak of the Mexican and European situations and the historic discussion of national defense now going on, we are in a Presidential campaign year.

The Senate resolution for a joint inquiry by Congress into the whole question of railway regulation has been crowded out of consideration by displacement on the House calendar, and two of these occasions did not involve any of the questions I mentioned, but first the Philippine Government bill and second the Rural Credits bill.

I submit that business men have no greater stake than their stake in the restoration of railway credit. The only route is affirmative relief by improvement in the regulatory mechanism. I know of no way by which Senators and Representatives can be induced to proceed vigorously and promptly with the consideration of the proposals now under consideration by various elements in interest and to frame a program for action next winter except by personal appeals of business men who are acquainted with them, backing up the resolutions which are being adopted by business organizations.

The fact that the Federal Trade Commission is now assisting associations, with the approval of the President, I am sure that the members of Congress will pay a great deal more attention to the ideas of business men throughout the whole country.

Development of Small Hydro-Electric Plants Suggested.

DAVID R. SHEARER, Consulting Engineer, Boone, N. C.

Although the South has been developing with marvelous rapidity during recent years, especially with regard to the production and use of electricity, there are still many opportunities for capital in the installation of small hydro-electric plants and the sale of power for lighting, light manufacture and farm use. The larger central stations have covered their own field well, and have done much for the advancement of the South's manufacturing and transportation interests, but there remain many small powers from 100 to 1000 horsepower lying remote from the lines of these power companies which may be made to pay a splendid return on the investment if the citizens can be made to realize the advantages accruing to the country and to themselves from the development, use and sale of this power. There are innumerable uses for electricity on every farm and in every village, and there is ample labor for the establishment of many light manufacturing plants to use the surplus power and work up the local raw material. The South ships out entirely too much of her productions in the raw state for others to finish instead of using local power and manufacturing herself.

In some sections of the country the people are awakening to the advantages of such developments, but there are many other sections where the water-power is going to waste, even though the capital for development could be procured easily from local capitalists.

The cost of operation of these small plants is very small, for if the installation is properly made, the machinery can be made to operate almost automatically and the attention required by the plant reduced to a few minutes daily. The income from such developments is good in practically every instance, and if a day load can be secured, the returns are usually more than can be secured from any other type of investment.

Frequently you will hear the statement that "we have a good power, but no use for it." This view is usually false, for in the present state of electrical development ample use can be found for all the power developed from small plants, regardless of the location. The writer knows of a small town in which there is a plant of over 100 horse-power loaded to its capacity in less than one year. In this town 99 per cent. of the population uses electric light or power in some form, and the plant has only been running this short time.

Electric power can be used in the home for a great many purposes besides lighting; on the farm, with a gain in economy and production, and in the many small shops scattered over the country. Where labor is scarce and expensive, power can be applied in diverse ways to reduce the cost of this factor of production costs.

The people should be made to realize the opportunities lying at their doors, and, having realized, should use local capital in such a way as will not only produce good returns on the investment, but go far toward building up and modernizing the isolated districts of the South. Then, indeed, can it be said that the South is taking advantage of her own resources to the advancement of herself and to the credit of her citizens.

Using Cars as Warehouses One Trouble With Railroads.

H. H. SNELL, Manager Lathrop Lumber Co., Birmingham, Ala.

It is our belief that the railroad facilities for handling the railroad business of the country are in about the same shape as for some time. Of course, there comes a time in the course of nearly every year when the volume of business increases over its normal amount, and then we have trouble to get cars, and the railroads have trouble to furnish them to meet this extraordinary demand.

It is my opinion that the present condition, however, is largely local in the section surrounding New York city, Boston and those points from which large ship-

ments are made by water, and that the railroads in the beginning had furnished cars indiscriminately in such a manner that the shippers were compelled and the railroads were compelled to handle the cars loaded as a sort of "warehouse" movement, so that the cars were tied up and were unavailable for use.

Why this has been so I am unable to state, but I have formed some opinion. I think if the cars which have been standing loaded in the East for the past several months had been released properly there would be plenty of cars to handle the normal business of the country, and the roads would be able to handle it without any serious difficulty; in other words, I think this is largely a condition brought about by the war and the boom in the war munition materials more than it is in the general inadequacy of the railroads to handle the movement of the freight of the country.

Active Demand for Minerals in Georgia.

S. W. McCALLIE, State Geologist, Atlanta, Ga.

Georgia, along many lines, has never heretofore experienced such activity in its mineral development as at present. Prospectors and would-be investors are everywhere seeking commercial deposits of baryta, pyrites, clays, feldspars, bauxite, manganese, etc. I find at nearly all mines there is a general complaint of the scarcity of labor, even though wages are higher than usual.

Gadsden Invites Alabama Power Co.

Gadsden, Ala., June 16.

Editor Manufacturers Record:

Inspired by the attempt of Birmingham city officials to collect a heavy license tax from the Alabama Power Co., which has headquarters in that city, Gadsden citizens have started a movement to secure the offices of the company.

Mayor W. G. Bellenger and President W. S. Vance of the Chamber of Commerce has sent the following telegram to the power company officials:

As a result of unfriendly local conditions we presume you will move your general offices. We invite you to make Gadsden your headquarters. We will exempt you from taxation for five years or more, and pledge our hearty co-operation and continued friendly support. Our people appreciate the great benefits resulting to Alabama by your splendid enterprise. Locate here where there is no antagonistic feeling toward public utilities.

The board of directors of the Chamber of Commerce has added its voice to the invitation in the following telegram:

The board of directors of the Gadsden Chamber of Commerce heartily concur in the invitation extended to you to move your head offices to Gadsden, and fully endorse the offers of our city officials to relieve you from taxation. The citizens of Gadsden are strongly united for the upbuilding of this community, for the protection of capital invested here, and we give assurance that your interests will be safeguarded and that you will have equal protection under the law.

To this has been added the following invitation from the Retail Trade Committee of the Chamber of Commerce:

The Committee on Retail Trade Extension of the Gadsden Chamber of Commerce in meeting this morning heartily endorses the invitation from Mayor Bellenger and President Vance to move your headquarters to Gadsden, and wishes to assure you a cordial welcome and hearty co-operation.

The Alabama Power Co. is believed to entertain a friendly feeling for the Gadsden district, because it has here a \$1,000,000 steam power plant in East Gadsden. Local business men believe that if the power company renounces the action of Birmingham officials to the extent of moving its headquarters, Gadsden will be chosen.

C. A. VER BECK.

Peanuts for Oil Mills.

According to reports received by the Texas Industrial Congress of Dallas, about 250,000 acres have been planted in peanuts in Texas this year. This report is based on returns received from county agents, bankers, cottonseed crushers and others.

It is also stated that many cotton-oil mills have installed machinery for crushing peanuts, and others are expected to equip their plants for the same purpose.

Oxygen: A Rapidly Growing Industry

ITS RELATION TO INDUSTRIAL DEVELOPMENT IN SOUTH.

By WARREN K. DOWE.

To speak of oxygen hardly more than a year ago was to suggest to the mind of the general public an agency of inestimable value in the sick room, an aid in mine-rescue work and a life-saver, through the use of the pulmotor, in many cases of asphyxiation and drowning. A wonderful boon to humanity, truly, and the possibilities of oxygen in such directions are by no means exhausted, but uses such as these could not provide the basis for what I have no hesitation in saying is the most rapidly growing industry in the country.

Today the public has general knowledge that the great use of oxygen is in the welding and cutting of metals—a statement simple to make but one on which volumes are now being written, for oxygen, in connection with acetylene, has revolutionized the process of manufacture in many lines of business connected with the metal industry.

It is an age of steel—steel ships, steel cars, steel furniture—and no single agency has done more to make the steel age possible than oxygen. To the old methods of cutting metal with hack-saw or shears has been added the modern method of cutting with the oxy-acetylene flame. To the old methods of riveting and brazing has come oxy-acetylene welding, and tanks and boilers and filing cases have largely adopted the new process for all or part of their work. To catalogue but the best-known uses of oxygen would fill a page of the MANUFACTURERS RECORD, and yet to give a fair idea a few uses may be specified. Let us take armor-plate for an example. Each year has seen it manufactured of greater hardness and strength till it has become absolutely resistant to saw and chisel. But armor-plate must be trimmed and cut, and the only available process is by the use of oxygen. To cite another instance, and one of particular interest because it opens up a field outside of the metal industries. A delicate, fragile globe for incandescent gas mantles has holes cut in its circumference that air may enter and mix with the gas. These holes are cut with oxy-acetylene. A mere touch of the 6300-degree flame does the work.

No railroad wrecking train is complete today without its oxy-acetylene outfit, for the problem of a railroad is to keep its tracks clear, have no interruption to traffic and wrecked steel cars can be most rapidly removed by cutting up the entangling beams with oxygen. And the steel cars are themselves welded when they are manufactured and damaged plates are cut out with oxygen when repairs are to be made.

The junk dealer has moved upward, and is now the scrap-iron man. One of the most progressive has yards a mile long with half a dozen railroad tracks, and into these yards are switched by gravity cars containing old engines and boilers and massive girders which no sledge could break and no shears could cut, but oxy-acetylene cuts the steel in sections of a size to again be available for the furnace. Such a concern as this uses over 1,000,000 feet of oxygen a year in one of its yards alone. A thousand junk dealers are now scrap-iron men, and their number is increasing daily.

But perhaps the more interesting feature of the business is not in the operations cited or such processes as cutting off risers on steel castings or removing old bridges, but, on the contrary, is where oxygen is used in the process of manufacture. Certainly the great future of the business is in this direction, and up to date various European countries have developed the industry far beyond what we have in the United States.

There are several reasons for this, but the fact that Central Europe and England had more oxygen plants, a shorter haul and consequently lower freight rates will probably be a sufficient explanation. With lower prices, oxygen came into general use and the industry developed with astonishing rapidity. Then, too, Europe had the best processes for making oxygen in the Claude system of France, now owned by the Air Reduction Co. in this country. This process manufactures oxygen economically and of a high degree of purity.

It is only within the last year that the Claude system has been secured for the United States, and within the last month its largest producing plant has been completed in Philadelphia. Plants of the same construction are built or building in many cities, and it is such an

one that is planned to be erected in Baltimore at an early date and in other sections of the South as well. And these plants are a necessity, for during the last year alone the consumption of oxygen has doubled and doubled and doubled again, and the increased demand still continues.

What these plants will mean for the South can hardly be grasped at first glance, for the consumers of the South use oxygen in smaller quantities than do those of Pittsburgh, New York, Chicago and Philadelphia. But the Southern States have a multitude of small users. Last year hundreds of cotton mills bought oxy-acetylene apparatus and lumber mills in only less number. The garages are more considerable users at the present time in connection with their repair work and carbon cleaning. The railroads, the shipbuilding plants, the steel mills, the scrap-iron men and the boiler factories are the largest users of all. But as oxygen becomes cheaper and more available through new plants why should not the South manufacture its own metallic bedsteads, more of its own steel cars, its enameled ware and kitchen utensils, its aluminum ware and its automobiles. All of these industries use oxygen, and use it in enormous quantities. In this connection it is interesting to note that the Aluminum Company of America is now building one of its greatest plants in North Carolina, and within the last week announcement was made at a meeting of Southern freight agents that a large automobile company was to build in Alabama.

Oxygen is delivered to the consumer in steel cylinders of 100 and 200 cubic feet capacity. The larger size weighs when filled about 150 pounds. As the maximum price for 200 cubic feet of oxygen is \$4, and the cylinder must be delivered to the consumer and when empty returned to the producing plant, it will be readily seen that shipments can be made for only moderate distances or freight rates would become prohibitive. For this reason it is impossible to promote the industry through the building of a few large plants of enormous capacity. To meet the present and growing demand for oxygen plants must be built in many localities and as close together as the consumption will justify.

How great is the interest in oxygen may be understood from the number of magazines which have regular departments devoted to welding and cutting. Two trade papers at least are devoted to the subject, and among the more prominent of the score of trade journals which have regular oxy-acetylene departments are The Iron Age, The Iron Trade Review, The Automobile Dealer and Repairer, The Blacksmith and Wheelwright, The Street Railway Journal and The Gas Age.

Each industry that these trade journals represent is using oxygen in ever-increasing amounts, and each industry is developing new uses so rapidly that it is difficult to follow all that is accomplished.

The old way of manufacturing oxygen by chemical process has been practically discarded. The cost of production by this means has proved to be too high, but the more serious obstacle has been the uncertainty as to the purity of the product.

Two methods are now in general use, electrolytic and liquid air. The electrolytic method decomposes water into its constituents, hydrogen and oxygen, by use of the electric current. This process is generally adopted for isolated manufacturing plants where freight rates are prohibitive or where there are no liquid air plants in the territory. Except where electric power is very cheap, this method is found to be expensive, but there is little doubt that the electrolytic process will find a considerable field for some time to come.

The liquid air process adopted by the Air Reduction Co. and its subsidiary, the Superior Oxygen Co., is producing oxygen of high purity and in enormous quantities. The process itself is interesting, as those who recollect the crude experiments with liquid air a dozen years ago will remember, but a description of it must take scientific form and is beyond the scope of this article. It is of great interest, however, to note that the by-product of oxygen when produced by liquid air is nitrogen and the production of nitrogen is of vital

importance to our country because it is the essential ingredient in both fertilizers and ammunition.

Today we are dependent on Chili for our supply of nitrates, and in the event of war, when the demand would be increased many fold, we would naturally expect the importation of even normal amounts to become difficult, if not impossible.

There is no known way to procure nitrates in sufficient quantity except from the large deposits in Chili or by manufacturing nitrogen by liquid air. The latter means is one of which Germany has taken advantage, and the production is from the Claude plants which were captured in Belgium.

Unfortunately, however, nitrogen, to be made available for either fertilizers or ammunition, must be converted into a different form, and this is done by a process called nitration. If the building of a plant for this work were the only thing, the problem would be easily solved, but the obstacle is in the enormous quantities of electric power required. Engineers figure that of the electric power necessary to convert nitrogen, but 10 per cent. is available in the actual work and 90 per cent. is wasted.

The greatest engineers and chemists in the world have endeavored for years to solve this difficulty, but without success. Consequently, nitrates can only be manufactured where water power is abundant and electric power is cheap. Such a condition exists in Norway, and the Claude system manufactures nitrogen there and converts it into nitrates. The same available water power and electric power is obtainable at Niagara and the Claude system again produces nitrates, but to our country's disadvantage the plant is on the other side of the border, and power is not available on the United States side. In fact, there is no cheap water power obtainable in the United States that can be developed by any individual or corporation. It is only in connection with some great Government project that cheap water power can be obtained. After looking over the field, I am inclined to accept the conclusion of the MANUFACTURERS RECORD that the Muscle Shoals location is the most desirable and promising. Should the Government undertake the development of this water power the difficult part of the nitrate problem would be solved—solved in a way to benefit not only the South, but the entire country, by the production of nitrogen for fertilizers in time of peace and the only safeguard for our country by producing nitrogen for ammunition in time of war. War may never come, but predictions of universal peace have proved worthless in the past, and in these days when we talk preparedness shall we neglect to provide the very means for our defense—ammunition—without which we shall be helpless.

[The directors of the Air Reduction Co., who, through the building of plants there, will come into closer touch with the South, are the following: Percy A. Rockefeller, R. C. Pruyn, president of the National Commercial Bank of Albany; Lorenzo Semple, counsel for the French Government; W. T. P. Hollingsworth, for many years manager of the Westinghouse interests in Europe; Ambrose I. Monell, president of International Nickel Co.; Charles Sabin, president Guaranty Trust Co., New York; Walter W. Birge, president of Air Reduction Co., Inc., and Paul Delorme and M. Deschieres of France, representing the French interests. Particulars in regard to this organization were given in the MANUFACTURERS RECORD a few weeks ago.—Editor MANUFACTURERS RECORD.]

Cotton Burrs as Another Source of Potash.

Along with the recent successful establishment and operation of by-product potash plants in connection with the manufacture of Portland cement and the suggested method of securing potash as a by-product in iron-making, comes the announcement of the utilization of another source of potash.

L. W. Woods, president of the Gulf Fertilizer Co. of Tampa, Fla., writes the MANUFACTURERS RECORD that his company is receiving cotton boll and burr ashes from Texas running from 10 per cent. to as high as 21½ per cent. actual water soluble potash.

Cottonseed a few decades ago was allowed to rot in the fields as do cotton stalks and burrs today, but it is one of the strong assets of the cotton crop now. Possibly the long neglected cotton stalk and its burrs may also become of great value because of its potash content.

The Petroleum Output in Appalachian Field.

The output of petroleum in the Appalachian field, which includes the areas of oil production in New York, Pennsylvania, West Virginia, Kentucky and South-eastern Ohio was 22,860,048 barrels in 1915, according to statistics compiled under the supervision of J. D. Northrop of the United States Geological Survey, a decrease of 1,241,000 barrels, or 5 per cent., from the output of this field in 1914. This decrease was well distributed among the contributing States, and is remarkably small in view of the fact that the oil market did not begin to recover from the depression caused by the overproduction of oil in Oklahoma in 1914 until August, 1915.

The petroleum marketed from the Appalachian field in 1915, in barrels of 42 gallons, was:

Pennsylvania, 7,838,705.
New York, 887,778.
Southeastern Ohio, 4,431,493.
West Virginia, 9,264,798.
Kentucky, 437,274.
Total, 22,860,048.

The average price of this oil at the wells was \$1.55 a barrel, and the total market value was \$35,468,973, a decrease of 33 cents in average unit price and of \$9,770,228, or 22 per cent., in total value, from 1914.

Throughout the field as a whole drilling activity, which generally reflects market conditions rather closely, was below the normal, though in certain areas there was abnormal activity resulting from the discovery that they were underlain by small pools of oil that had been overlooked in the earlier development of the region.

A total of 5197 wells were completed, of which 2905, or 56 per cent., yielded oil, 1254 were classed as gasers and 1038 were barren. The combined output for the first day of productive life of the oil wells completed in 1915 was 31,992 barrels, or an average of 11 barrels for each well. Individual wells in Pennsylvania and New York averaged 7 barrels each, in eastern and central Ohio 12 barrels, in Kentucky 13 barrels and in West Virginia 18 barrels.

Developments in West Virginia in 1915 did not extend much beyond proved territory, and no important areas of new production were discovered. In all, 763 successful oil wells were completed in this State in 1915. Marion county leading in activity, but Kanawha county leading in new production. The pool discovered in December, 1914, near the mouth of Laurel Run, in Cabin Creek district, in Kanawha county, contributed 10 wells that averaged better than 100 barrels each the first day of their productive life, but attracted little attention from companies other than the Columbus Producing Co., which controls the oil rights on several thousand acres that surround the pool. In Wetzel county deeper drilling on Fishing Creek, near the town of Minnie, resulted in the partial development of a promising pool of oil in the Big Injun sand, and in Clay district, in Monongalia county, the unexpected discovery of oil in a well drilled for gas near Mooresville caused a little additional drilling.

In strictly wildcat territory a small producing well was reported late in the year on Clymer Creek, Curry district, Putnam county, and in September the efforts of the South Penn Oil Co. to develop a Berea-sand pool in Butler district, Wayne county, on the Kentucky border, were rewarded by a 10-barrel well in an area where previous tests had been disappointing.

In December the completion of a small oil well two miles west of the old Murphytown pool, in Clay district, Wood county, revived interest in the possibilities of finding a new pool in the vicinity of Parkersburg.

In the "deep-sand" territory, where the oil is obtained from the "Clinton" sand, interest was well sustained in the Union Furnace district, Hocking county, by the successful completion of a number of wells, ranging in initial production from 100 to 350 barrels, in an area whose limits have not yet been fully determined. Efforts to extend the area of "Clinton-sand" production southward into Vinton county were sufficiently successful to inspire new drilling that should furnish conclusive results in 1916. Toward the north operations in Muskingum, Perry and Licking counties failed to add new territory to the developed pools. Late in the year the advancing oil market resulted in a marked increase in wildcat activity in this part of the State in search for new pools of "Clinton-sand" production comparable with the Bremen, Wooster and Sugar Grove pools. That this search may result suc-

cessfully in 1916 is indicated by the encouraging results of one test in Holmes county, east of Brinkhaven, that was reported good for 100 barrels of oil the first day of productive life.

The completion of only 92 wells in Kentucky in 1915 as compared with 178 in 1914 reflects the state of lethargy that prevailed in the oil fields of that State during the greater part of 1915. The year was not, however, without its developments of interest to the local industry, though they came too late to affect appreciably the oil output in 1915. The most important feature of this character was the rejuvenation of the old Irvine pool in Estill county, or rather the extension of its productive limits six miles toward the northeast. The restoration of pipe line facilities to this pool by the Cumberland Pipe Line Co. in December stimulated activity in the new extension, which is certain to give a good account of itself in 1916.

In the Scottsville petroleum district, in Allen county, which has no market outlet other than the railroads, little activity was reported until late in the year, when the price of oil had advanced to a point where rail shipment became feasible. Before December 31 a number of good wells had been completed in this district, one of which was a mile beyond territory in which there had been any production.

In Edmonson county the completion of a 10-barrel well in April attracted little attention in an area remote from facilities for marketing.

The return of Tennessee to the ranks of the oil-producing States comprised a feature of much interest in the Appalachian region, though the absence of markets prevented the State from making a statistical showing in 1915. In April the Whitcomb Oil Co. successfully completed a 50-barrel well at a depth of 1700 feet (pay "sand" at 945 feet) on the Toomey farm, four miles northwest of Oneida, Scott county, near the Kentucky boundary. At the end of the year the "Oneida pool" was credited with four oil wells having a combined capacity of 200 barrels of oil, one gas well and seven dry holes, and other test wells were being drilled in Scott and Fentress counties, in the northeastern part of the State, and in Lake county, in the extreme north-western part.

Blast Furnace Constructed in Record Time.

Working 750 men on actual construction and as many more producing the necessary material, the Cambria Steel Co., Philadelphia, smashed all records for speed in blast furnace construction recently when it completed the erection in 85 days of its No. 9 furnace at Johnstown, Pa., with 500 tons daily capacity. Heretofore from eight months to a year has been taken for such a work, with six months for race jobs.

On March 6, 1916, the directors authorized the construction of a new furnace, and on March 9 E. E. Slick, vice-president and general manager, approved a general layout and the engineering department began preparing plans. In clearing the site a slag machine and part of a cashouse had to be removed, together with a steam line and heavy power lines.

On March 12 construction commenced and the new furnace and stove foundation were staked out. The furnace foundation was completed on April 7, and on May 6 the steel work was erected complete. The bricklayers commenced laying the hearth on April 15. They completed lining the furnace, bleeders and bustle pipe May 1.

On March 12 excavations for the hot blast stoves and chimney were started, and on March 16 the concrete foundations were begun. The excavations were completed March 29 and the foundations March 31. The steel work erection for the four stoves was commenced April 4, and two were erected on April 26. The bricklayers commenced laying brick on them the same day, and the second pair were erected May 12.

The excavation for the skip-pit was commenced April 1 and the bridge was completed May 31, including an Otis steam hoist.

In connection with the work, extensions were made to the boiler-house building to take care of twelve 300 horse-power B. & W. boilers equipped with superheaters. The present blowing engine-house was extended to accommodate a 48x86x84x60 Hooven, Owens & Rentschler engine, on which the air end was designed by E. E. Slick, in order to secure the prompt delivery required.

World's Production of Fertilizers.

From data collected by the International Institute of Agriculture the following table has been compiled by the Bureau of Commerce, showing the world's production of fertilizers. Where no figures are given for the years specified statistics were not available:

Fertilizer and country.	1912. Metric tons.	1913. Metric tons.
Natural Phosphates.		
Belgium	203,100	219,420
France	330,000	335,000
Norway	1,168	757
Russia	25,737	
Spain	3,292	
Sweden	15,317	
Canada	167	
United States	3,021,654	3,161,156
French Guiana	7,014	
Dutch Indies	20,362	
Japan	7,879	
Algeria	388,515	461,030
Egypt	69,558	101,311
Tunis	2,057,498	2,284,678
South Australia	6,138	6,049
Palau Islands	60,000	80,000
Makatea	40,000	82,000
Christmas Islands	159,512	152,495
Ocean and Naurn Islands	300,000	
Basic Slag.		
Austria-Hungary	94,700	
Belgium	534,000	655,000
France	673,000	400,000
Germany	2,110,000	2,250,000
Italy	230,000	
Luxembourg	253,000	250,000
Russia	16,000	32,000
Sweden	15,000	16,800
United Kingdom	300,000	404,000
Superphosphates.		
Austria-Hungary	397,300	
Belgium	450,000	450,000
Denmark		85,000
France	1,550,000	1,520,000
Germany	1,718,400	1,818,700
Italy	1,013,300	972,500
Russia	205,200	
Sweden	168,500	
United Kingdom	840,000	820,000
United States		2,348,000
Potash Salts.		
Germany:		
Carnallite, kieserite	5,281,645	5,302,350
Kainite, hartsalz, schonite sylvinite	5,788,372	6,305,160
Manufactured salts.		
Chloride of potassium, 80 per cent.	471,435	484,254
Sulphate of potassium, 90 per cent.	115,728	110,784
Sulphate of potassium and calcined magnesias	55,987	58,269
Potash salts for agriculture	771,316	956,606
Sulphate of potash and crystallized magnesias	173	119
Kieserite in blocks	45,482	36,708
Kieserite, calcined, ground	1,070	1,195
Nitrate of Soda.		
Chile	2,586,975	2,773,450
Nitrate of Lime.		
Norway	36,468	73,214
Sulphate of Ammonia.		
Austria-Hungary	32,940	39,000
Belgium	43,700	48,600
Denmark	2,400	2,800
France	68,100	75,600
Germany	492,000	549,000
Italy	11,100	15,000
Netherlands	7,000	7,000
Russia	4,000	8,000
Spain	12,000	15,000
Sweden	1,280	1,380
United Kingdom	394,230	438,930
United States	149,700	176,500
Japan	7,300	8,000
Australia	3,000	3,000
Calcium Cyanamide.		
Austria-Hungary	4,500	7,500
France	5,000	7,500
Germany	22,000	24,000
Italy	10,304	14,382
Norway	13,890	22,710
Sweden	6,043	18,350
Switzerland	5,000	7,500
Canada	32,000	40,000
Japan	5,300	7,000

*Production in 1911. †Production in 1907.

The production of sulphuric acid in Germany, Italy and the United Kingdom according to official reports of these countries, was as follows: Germany, 1,380,700 metric tons in 1910, 1,500,200 tons in 1911 and 1,649,700 tons in 1912; Italy, 506,143 metric tons in 1911, 634,521 tons in 1912 and 644,713 tons in 1913; United Kingdom, 475,000 long tons in 1907.

Later figures are available for the production of several items in different countries. The output of natural phosphates in the United States in 1914 was 2,777,924 tons. Tunis produced 1,443,767 tons in 1914 and 1,389,074 tons in 1915. In the first six months of 1914 Algeria exported 355,140 tons, Egypt 80,572 tons, while the production in the Palau Islands was 60,000 tons. The United Kingdom produced 392,104 tons of basic slag in 1914 and 386,098 tons in 1915. Denmark in 1914 produced 85,000 tons of superphosphates. Nitrate of soda production in Chile in 1914 was 2,464,427 tons, and in 1915, 1,763,639 tons. The production of sulphate of ammonia was as follows: France, 91,500 tons in 1914 and 42,000 in 1915; Italy, 14,323 tons in 1914 and 15,000 in 1915; Sweden, 1510 tons in 1914; United Kingdom, 433,235 tons in 1914 and 429,768 tons in 1915; United States, 166,015 tons in 1914 and 192,323 tons in 1915; Germany, 413,837 tons in 1914. In 1914 Italy produced 22,500 tons of calcium cyanide and Norway 14,670 tons.



ONE OF THE LARGE TANK-CAR SHIPMENTS OF CRUDE OIL LEAVING THE OKLAHOMA FIELDS.

Heavy Shipments of Crude Oil in Tank Cars.

Shamrock, Okla., June 10—[Special.]—Tank-car shipments of crude oil from the Oklahoma fields have increased greatly in importance during the past few months, resulting principally from the additional demand for the crude by refineries everywhere. The Standard Oil Co. of Indiana has just purchased two tanks of oil, amounting to 110,000 barrels, from the Roxanna Petroleum Co., and the crude is to be sent eastward by rail at the rate of 20 cars a day until the whole is delivered. The tanks are located on the Santa Fe and "Katy" tracks at Norfolk, Okla., the oil coming from the Cushing field. It is understood that the Roxanna received \$1.90 a barrel for the oil, or a total of \$209,000.

At the present time, too, the Santa Fe Railway Co. is filling an order that covers four years' time, delivering four trains of oil daily for four years. This oil is shipped directly from the Cushing field, being loaded in tank cars in the vicinity of the producing wells. It is understood that the Santa Fe's hauling contract calls for \$275,000 a year, or a total of \$1,100,000 for the four-year period. About a year ago the Santa Fe Company purchased two newly-built oil-field railroads, and it is said that this four-year contract was certain when the Santa Fe acquired the two lines.

The total number of oil tank cars now in use in the United States is placed at 27,000, of which 11,900 are credited to the Union Tank Line Co., while the remaining 16,000 are listed as belonging to various so-called independent companies. The total investment in these cars is placed at \$27,000,000.

In Oklahoma, according to the figures of the State Corporation Commission, there are 5019 oil tank cars in use in the fields in this State, of which 3185 are owned within the State. The commission placed a value on these of \$3,263,204. All of the prominent refining companies have strings of tank cars. The J. S. Cosden Company of Tulsa has purchased 475 cars during the present year, giving that concern a total of 1143 cars, while the Chanute Refining Co. of Chanute, Kan., and Cushing, Okla., has 350 such cars in service.

Bauxite and Aluminum Industries Prosperous in 1915.

The bauxite and aluminum industries in the United States had a banner year in 1915. The production of bauxite was 297,041 long tons, valued at \$1,514,834, an increase of 77,723 long tons, or 35 per cent. in quantity, and of \$445,640, or 41 per cent., in value compared with 1914, according to a statement issued by the United States Geological Survey. This abnormally large increase in bauxite production is due to the greatly increased activity in the aluminum industry. The quantity of foreign bauxite used during the year was exceedingly small, for obvious reasons, and out of a total consumption of more than 300,000 tons, only slightly more than 1 per cent. was imported. Arkansas produced more than 90 per cent. of the domestic production, and Georgia, Alabama and Tennessee contributed the remainder.

In spite of the fact that the metallic aluminum consumed in the United States in 1915 amounted to 99,806,000 pounds, there was a great scarcity of the metal in this country, especially during the latter part of the year, according to information gathered by W. C. Phalen of the Geological Survey. A greatly increased demand, together with the curtailment of imports, were the chief causes of this scarcity.

The applications of the metal have been many in the war in Europe. Light aluminum alloys have been

largely employed, and the metal itself has found favor in camp equipment and especially in the manufacture of automobile bodies and air craft of all kinds. Aluminum powder has been extensively used in making ammonal, a high explosive, by mixing it with ammonium nitrate. The explosive is reported to be insensitive, very stable and destructive.

Andalusia's Typical Experience With Packing Plant.

Montgomery, Ala., June 17—[Special.]—When the Andalusia (Ala.) Packing-house opened this week the event was hailed as an important industrial event for Alabama. The contract for construction was let last October, and in seven months the plant was ready to run. Andalusia's plant is said to be the largest in the South, as well as the most modern and best equipped. It was built at a cost of \$150,000, and is owned entirely by local people living in nine or ten counties of Southern Alabama. The plant has a killing capacity of 2000 hogs and 50 cattle daily, but its freezing capacity is limited to 500 hogs a day. It is thought that this capacity will take care of the hog production in Southern Alabama, Northern Florida and Eastern Mississippi for at least two years, when, by adding cold-storage units, the plant can be made to take care of its full killing capacity.

The plant will not run at full speed through the summer, but will give the farmers throughout Alabama, Florida and Mississippi a market for such hogs and cattle as they have. The prospects for next winter are that from October 1 the plant will have sufficient hogs and cattle to run at full speed through the winter and into the spring.

Although the plant has just started operation, its benefits are manifest already. In spite of the presence of the boll-weevil, land prices in this section have held their own, and the prospects are that thousands of people will buy farms and settle in Southern Alabama within the next year in order to be in close proximity of the packing plant. In fact, this movement has already started, and some outsiders have bought and recently settled in Covington county.

The Andalusia plant has been paying close to the Chicago price for hogs and cattle for the past two weeks, and some very fine hogs have come to the plant.

State Recognition Aids Maryland Agricultural College.

The policy of the last Maryland Legislature in recognizing the Maryland Agricultural College, College Park, Md., as the State college of Maryland, is expected to give the State a more economic and efficient service in the important work of educating the young farmers and co-operating with those on the farms, whether or not graduates of the college. The establishment of the Maryland Agricultural College in 1856 is said to have been the first effort in the Western Hemisphere to use scientific investigation for the advancement of agriculture. For the first few years the college was run as a private institution. Since, it has received State and Federal aid and has expanded its curriculum to include scientific and engineering courses. That the conditions surrounding students at the college are highly healthful is evidenced by the statement that for several years there has not been one case of serious illness among the students there. Expenses have been arranged to place the advantages of a college education within the financial reach of young men in moderate circumstances, while the accommodations are kept at a high standard.

Milwaukee Capitalists Looking Southward.

The Milwaukee capitalists who recently purchased a controlling interest in the Baltimore Drydock & Shipbuilding Co., through Mr. Thos. H. Bowles of this city, are enthusiastic in their commendation of what Baltimore shows in the way of material upbuilding, and their investment here may lead to the turning of their attention to other Southern points.

Mr. Bowles recently bought and mailed to his Milwaukee associates in this enterprise copies of the special edition of the MANUFACTURERS RECORD published two years ago, entitled "Baltimore—Past, Present and Future." Acknowledging the receipt of this, Mr. L. L. Pettit, president of the Wisconsin National Bank of Milwaukee, one of the leading banking institutions of the Middle West, wrote Mr. Bowles:

"I am just in receipt of a copy of 'Baltimore,' illustrated. It is one of the finest publications of this kind that I have ever seen, and for which I thank you. I want to congratulate you on the successful consummation of the closer association with some of your admirers of the Wisconsin Security Co."

And Mr. Luddington Patton of the Patton Paint Co., which is known throughout the South as well as in other sections, wrote:

"I have just received from the MANUFACTURERS RECORD a copy of an illustrated special issue of that paper dealing specifically with the city of Baltimore, a perusal of which confirms the impression I received on my last visit to Baltimore of the most wonderful progress which has been made in the city's affairs during the past few years."

Alabama Power Co.'s New Steam Plant.

Birmingham, Ala., June 16—[Special.]—The Alabama Power Co. has let the excavating contract to the Jefferson Construction Co., Birmingham, and work on the general construction will soon begin on the reserve steam plant the former proposes to build on the Mulberry fork of the Warrior River, 24 miles from Birmingham and 7 miles from Cardova. The plant, according to J. E. Sinit, electrical engineer for the power company, will be completed within a year at a cost of approximately \$1,500,000. At this time it has not been decided whether the work will be done by the power company forces or under contract.

The reserve steam power plant is to be rectangular in shape, 163x88 feet at the furthest width and length points, and 60 feet high. It will contain one Westinghouse steam turbo-generator, generating 35,000 horsepower. The building will have a brick and concrete foundation, the frame being of steel, which the Ingalls Iron Works Co. of Birmingham will furnish.

It is planned to complete the plant within a year.

Coal Production of Maryland Increases.

From statistics compiled by the United States Geological Survey, the coal production of Maryland increased in 1915 over 1914 1.1 per cent. in quantity and nearly 2 per cent. in value. In 1915 the production was 4,180,477 short tons, valued at \$5,230,845, as compared with 4,133,547 short tons, valued at \$5,234,796 in 1914, a gain in quantity of 46,930 tons and in value of \$96,049.

A greater part of the increase is said to have occurred in Garrett county, which in 1915 produced 782,976 tons, as against 671,621 in 1914, while Allegany county's output decreased from 3,449,365 tons in 1914 to 3,388,365 tons in 1915.

The Iron, Steel and Metal Trades

EXPORT ORDERS BRIGHT SPOT IN STEEL SITUATION.

Expected Activity in Pig-Iron Not Materializing.

[Special Correspondence Manufacturers Record.]

New York, N. Y., June 20.

One of the bright spots in the local steel situation is the increase in orders being received by various mills to be placed abroad, covering fair-sized tonnages. While thus far the contracts placed have not been large, it is said on the best authority that purchases of steel products by a number of the belligerent governments will shortly commence on an extended scale. It is pointed out by these interests that while the manufacture of munitions in foreign countries has been increasing, there have been no additional sources to supply the raw materials, and that the United States will be called upon for additional quantities from time to time. The opinion is becoming quite general in steel circles that the placing of further loans or credits in this country for the account of various European nations will be followed by purchases of various steel products on a comparatively large scale. It is stated that with such a good demand in sight there is nothing to prevent good times for the steel manufacturers.

The probability of a prolonged war with the de facto Government of Mexico is also another factor that may prove beneficial to the steel situation. If war actually comes—and there appears to be little doubt of it now—it will tend to increase munition manufacture in this country and keep up the demand even should an early peace be declared in Europe.

Some time ago the various steel concerns notified the Washington Government that they would be willing to turn over their plants to the Government for the manufacture of all munitions that are desired by the American army at a moment's notice. It is not believed, however, at this stage that such a move will be necessary, unless the Mexican war should prove a more drawn-out affair than our late trouble with Spain.

It was learned today that a part of the \$50,000,000 loan, which has just been arranged by the Russian Government with American bankers, will be devoted toward the buying of rails, cars and locomotives. It is said that about 300,000 tons of rails, 10,000 cars and 600 locomotives are involved in the dealings now under way. The United States Steel Corporation is expected to secure about 250,000 tons of the rail business, the rails being 67½-pound sections, with the balance of the rail tonnage going to Buffalo and Pennsylvania mills.

Among other foreign orders coming into the market is one for 100,000 shell forgings by the Pressed Steel Car Co. The forgings are for 9.2-inch shells, and the contract price is \$2,250,000.

A market that is showing signs of improvement is that for steel sheets. Blue annealed sheets are in fairly good demand, and sales are reported at 3.25 cents, and even higher, although leading manufacturers are still quoting 3.05 cents for Bessemer and 3.15 cents for open hearth, No. 10 gauge. Sales of galvanized sheets are noted at around 4.75 cents, but the chief market factors are holding their quotation of 5 cents.

Despite the high price of steel shapes, extensive building operations are being undertaken in various parts of the city. There is a considerable amount of structural work now pending in the market, and with prospects for slightly easier prices in early shipments of plain material builders who have been hesitating are now likely to place their orders for structural steel delivery during the winter and early spring of next year.

Despite the signs of renewed activity in the steel market, the consensus of opinion is that the crest of the upward movement of prices on finished and semi-finished steel products has passed. The reductions of several weeks ago, however, have come to an end also, and the market now appears to be on a steady basis. There is not any material change in the situation, with the exception that consumers are not coming into the market in such numbers as heretofore. It is the belief in steel circles that the reason for this is that buyers are commencing to realize the fact that manufacturers are telling the truth when they state that their orders on hand will keep their plants running at a capacity until the end of the year. Steel producers are assured

capacity operations for several months into 1917, and they are now in a position to sit back and wait for orders for some time, even if the buying should stop entirely, which, of course, is out of the question. Bookings of the various steel companies are virtually all for next year's deliveries. In only a few minor articles can contracts be taken for the last two months of 1916, and the tonnage to be had at best is very small.

There is considerable comment in steel circles caused by the falling off in orders for railroad equipment, even as compared with recent weeks, which have not developed a great amount of this business. This falling off in orders is said to always precede and follow the annual convention of the Master Car Builders' Association. This convention was held at Atlantic City, N. J., at the end of last week. At these meetings reports covering conditions in all sections of the country are presented by the several committees appointed to study these questions. Defects are pointed out and suggestions for improvements discussed. The result goes to establish standards for the ensuing years. Rules that will be followed by the locomotive and car builders are formulated. Until the findings of the association are reported, probably some time in the latter part of this week, and the expected changes in standard specifications for freight cars and other railroad equipment are made, it is said orders will be held up until the new specifications can be used. However this may be, the greatest deterrent factor in the matter of car buying is undoubtedly the high price for materials. It is reported that the railroads have not a sufficient supply of cars available to handle the traffic that is in prospect for next fall and winter, and that they will suffer as much from failure to have the cars where needed, owing to congestion at many points, as from an absolute lack of cars.

Despite the constant reports to the effect that the pig-iron situation is becoming remarkably active, and that there will be a shortage of iron by midsummer, there do not appear to be any facts in sight as yet to justify these statements. The present inactivity of pig-iron, however, has failed to induce any weakness among furnaces. Northern furnaces are holding very firmly to prices, with No. 2 foundry quoted at \$20.50 to \$20.75. This adherence to quotations has removed the impression that producers would quickly make concessions. Business continues quiet, notwithstanding contrary reports of a bullish nature, evidently emanating from sources which have iron to sell but are holding and hoping for better prices. Except for the much-touted foreign demands, which, with the exception of a few inquiries for basic iron from Canadian melters, and contracts for a few lots that are being sold from day to day, any extended foreign orders have failed to materialize, and new domestic business is limited.

There is an easier tendency becoming noticeable among Buffalo furnaces, with No. 2 foundry reported sold at \$18.50 to \$18.75. Bessemer at Cleveland is holding firm at \$21, while Northern foundry No. 2 is keeping a fairly steady level at \$19.30 to \$19.80. To a certain extent the dullness has proved beneficial to the pig-iron situation. Several important factors assert that it has stopped the feverish buying, which was bound to cause trouble later on, and has rendered business more conservative and stable, which will materially aid in prolonging the period of prosperity.

Steel trade interests in general, in summarizing the situation, state that there are no actual signs of weakness anywhere, and conditions as above outlined apparently bear out this assertion.

DULLNESS PERVADES METAL MARKETS.

Copper Strong in Undertone, But Lacks Snap—Tin Sags—Lead Prices Too High for Heavy Buying—Spelter Quiet and Easy.

New York, N. Y., June 20.—[Special.]—The copper situation can be likened to that of steel. The producers are sold far ahead, and no large quantities of metal can be sold for delivery in the last half of the current year. While foreign buyers are undoubtedly sounding the market, no business of any importance for European account has appeared in the domestic market as yet. Large producers are still quoting prices that in no way

actually represent the spot market, in which they have no interest because of their being sold several months ahead. Second hands are bringing to light more and more copper, part of which is being absorbed by consumers, and the remainder is finding its way into the hands of holders who appear confident of another advance in values. There appears to be an undercurrent of opinion in the trade, however, that developments of further foreign buying may be looked for at any time. No one actually knows whether Europe is buying or not, and if so, in what amounts. It is believed that several of the allied governments have not yet covered their requirements for 1917, and these requirements are placed in some quarters at as high a figure as 500,000,000 pounds.

Statistics show that in the matter of production the increase in the copper output has been more stable than that of steel. The longer the war lasts the greater the copper needs of Germany as well as other warring nations. Most of the copper purchased in this country by Europe is being destroyed as rapidly as it is shipped. The belief that England is about to enter the New York copper market is strengthened by the fact that London is evidently striving to force down the price of electrolytic, as the cables from the other side plainly show that the quotations in the Standard market are being manipulated. Hardly a day passed during the past week that values of Standard copper on the London Exchange did not decline, without any actual sales having taken place. It is to be questioned, however, whether England and her allies will be able to purchase the red metal here at concessions which the speculative fluctuations on the London market indicate as about to be attempted. Prices of copper at New York are at about 27 to 27½ cents for spot electrolytic, 27½ to 27¾ cents for late June and 27¾ to 28 cents for July and August. Spot Lake copper is quoted nominally at 27 to 27½ cents, late June at 27½ to 27¾ cents and July and August at 27¾ to 28 cents.

The tin market is in the same dull and easy state that has characterized it for weeks past. The constant declines on the London and Singapore markets, the absence of consumptive demand and the continually improving statistical position of the metal are all tending to depress the market and lower prices. Transactions are few and far between, and what trading is being done is of a strictly small character. Shipments since June 1 total 3260 tons, which, together with 3260 tons afloat, bring stocks in sight to a trifle over 7000 tons. The market is quotable at 41 to 41.50 cents for spot, with July at 41¼ cents.

Lead is a metal that is apparently going begging these days. Despite the lack of demand and the attempt of independents to force the American Smelting & Refining Co. to drop its price by shading the market at 6.75 to 6.85 cents, that factor strictly adheres to its price of 7 cents. There is said to be a slight foreign demand, and small tonnages have been sold in the past few days. Both Japan and Russia are said to be in urgent need of lead, which they are willing to buy here if they can obtain it at the right price, which thus far they have been unable to do. The market appears to be in a rut, from which nothing can awake it except a renewal of export buying, which is almost impossible at present quotations.

There has been a lot of talk in local metal circles relative to renewed buying in spelter, but thus far that is all it has amounted to—just talk. Holders of spot metal are not disposed to appear anxious to force stocks on the market and thus create even lower levels than are now prevailing, and consequently are holding off as much as possible. Sellers of forward metal have much the same attitude. They do not consider the time opportune to push consumers for commitments, and consequently the market is dull and lifeless. Buyers, on the other hand, are still of the opinion that prices will soon drop to levels which they maintained for almost 30 years prior to the European war, and are not disposed to take on stocks at this time. There seems to be a great difference of opinion as to the prices of spelter. Prime Western brand is selling in the neighborhood of 13 to 13¼ cents, July 12½ cents and August 12 cents. Fourth quarter delivery is around 10½ to 11 cents.

[Special Dispatch to Manufacturers Record.]

New York, N. Y., June 20.

No change in local metal prices. London cables show declines £4 standard spot copper to £106, futures £3 to £103, electrolytic £1 to £138, spot tin £1 to £177, futures

£160 to £178 5s; Straits unchanged at £178 10s., spelter unchanged at £68 spot, £30 10s. 6d. futures. Future lead down 2s. 6d. to £30 17s. 6d., spot unchanged at £31 7s. 6d.

Copper producers state Mexican war will cause prices to harden, as closing down of Mexican mines will curtail productive capacity about 20,000,000 pounds monthly. Moctezuma Copper Co.'s mine has been closed, but other companies still operating. Plan is to have mines operated under guard of American soldiers if same can be spared.

War will not affect steel situation, as only small-arm ammunition will be required. Munition plants cleaned up on foreign contracts will supply orders.

American Locomotive Co. closed today for 5000 tons foundry pig-iron for delivery in second half; more inquiries for Bessemer low-grade phosphorus appearing here; estimates place 50,000 tons done in past fortnight and negotiations active for equal amount; prices at some Northern furnaces weakening, with orders being placed at \$18 at furnace for No. 2 foundry iron.

Iron, Steel and Coal Matters in Alabama.

Birmingham, Ala., June 19.—[Special.]—Steel manufacture in Alabama has reached its highest tide. It is around 100,000 tons per month, or at the rate of 1,200,000 tons per annum, which may be compared with the following highest preceding records: 1913, 778,000 tons; 1911, 716,000 tons; 1915, 715,485 tons.

The average production of basic pig-iron, practically all of which goes into steel shapes in Alabama, is around 75,000 tons per month. To this must be added, in the case of one manufacturer, 35 per cent. of scrap and a smaller amount in that of another, while there are small losses in the basic metal in the process of conversion. In fact, the leading interest is turning out around 80,000 tons of steel per month and the Gulf States Steel about 16,000, a total of 96,000, a trifle under 100,000.

It has been Alabama's salvation that the Tennessee Company, ever since passing under control of the United States Steel in 1907, has constantly added to its steel output, and has thus not only used a large amount of iron in home manufacture, but, by reason of its extensive manufacture of basic metal, has left the foundry market open to the other Alabama makers.

Just exactly one-third of the May make of Alabama iron was basic, and entered into steel shapes made here. The foundry makers had 75,000 less foundry iron to offer the general market, a condition which necessarily steadies the Southern foundry market at critical seasons. Enlargement of the Atlanta steel works, the new Chattanooga steel plant, besides the American Steel & Wire plant, which is already a large steel consumer, the new electrical steel furnace at Anniston and other increasing demands for steel in the South insure a still greater output of steel iron and a still greater quantity of finished steel products being made in the Birmingham district and adjacent territory.

Birmingham iron men do not know what the market is, nor does anyone else. Trading is at such a low ebb that there is no basis. It would be as unfair to predict a lower market when buying is resumed as to forecast a rising one. The constant hammering that has been done by warrant iron ought soon to play out as the facts and conditions develop. Fully a half of the 92,000 tons of warrant iron on Alabama yards is owned by radiator and pipe interests, who will consume it themselves. They bought it at bottom-rock prices last autumn. The other half has jockeyed all up and down the line. It has been offered at \$14.50, then \$14, and some of it under that. But when the consumer goes to buy warrant iron he must pay cash, and there are other trading objections to it, so much so that little of it has been disposed of. Some brokers have quit "fooling" with it at all. However, this iron has served to soften the market and has altogether done lots of harm.

Furnace men have not marked down below \$15, and the scattering sales that have been recently made are on that basis. Spot and forward car lots brought that price uniformly.

The heavy movement of pig-iron is consoling. The car service report for May was 82,000 cars, an increase of 25,000 over May of 1915 and one of 50 over April. This shows that the pig-iron is moving out of the yards.

Although the May Alabama output of pig-iron was

223,000 tons, stocks on hand the first of June had increased fractionally only, the total of all kinds being about 250,000 tons, as compared with 365,000 tons at this time last year. Considering that Alabama furnaces have been making new high records of production for eight months (an average of 60 per cent. over 1915), that stocks have not accumulated is considered very remarkable.

Market conditions will not, it is believed, affect furnace resumption schedules. The Sloss-Sheffield, which has resumed at Sayre and other coal mines and Irondale ore mines, is ready to start its idle city furnace on schedule time, July 1. The Woodstock will, it is believed, do likewise.

The coal mines are busier than in some time, owing to the recent large contracts.

Coke will remain strong as long as the furnace companies continue to consume their own output and leave the open market to the independents. Coke is firm at \$4.25 to \$4.50 for large and small quantities.

Besides the order for 1000 tons of pipe for Santos, Brazil, secured by the leading interest, there are other Latin-American inquiries in the market, which is also steadied by small lots from all around coming in regularly.

Old material is weak, a trifle softer perhaps, but prices have not been marked down.

PIG-IRON.

No. 1 foundry.....	\$15 50 to \$15 75
No. 2 foundry.....	15 00 to 15 25
No. 3 foundry.....	14 50 to 14 75
No. 4 foundry.....	14 25 to 14 50
Gray forge.....	14 00 to 14 25
Basic.....	15 00 to 15 25
Charcoal.....	22 00 to 22 50

OLD MATERIALS.

Old steel axles.....	\$22 00 to \$23 00
Old steel rails.....	11 00 to 11 25
No. 1 steel scrap.....	9 50 to 10 00
No. 1 wrought scrap.....	13 00 to 13 50
No. 1 cast scrap.....	11 00 to 11 50
Extra heavy cast scrap.....	9 50 to 10 00
Stove plate and light cast.....	10 00 to 10 50
Old car wheels.....	10 50 to 11 00
Tram car wheels.....	9 50 to 10 00

The Navy and Alabama Coal.

Birmingham, Ala., June 19.—[Special.]—The Birmingham correspondent of the MANUFACTURERS RECORD in an article appearing in the MANUFACTURERS RECORD of June 1 did not intend to convey the impression that in its recent awards to Alabama coal operators for coal for Government use at Pensacola and New Orleans the Government was using Alabama coal in Southern waters for the first time. He used the term "first formal recognition of Alabama coal by the navy."

Alabama coal has been used by the Government at Mobile, New Orleans and Pensacola as far back as 15 years in a limited way. The recent award of contracts for Pensacola and New Orleans followed immediately upon the heels of a stout and persistent presentation of the merits of Alabama coals made to the Navy Department by Congressmen Oliver, Gray and Huddleston and United States Senators Bankhead and White. As the outcome the Navy Department accepted Imperial company's coal for tests on the cruiser Flusher and other vessels of the Navy Department plying in the Mexican waters out of New Orleans.

Then the Government invited Alabama coal operators to bid on supplying its Pensacola and New Orleans needs. Alabama coal operators, who backed their Congressmen in their efforts, have naturally presumed that the recent awards were the outgrowth of these efforts. Indications most assuredly are that Alabama will supply more and more coal for the Government in Southern waters year by year henceforth. The awards were regarded in coal circles at large as a formal recognition.

However, when Alabamians made their most recent efforts to force the more thorough recognition of their coals and greater use by the Government in Southern waters, they had not only the 1912 tests, which absolutely established their merit, but the success which for several years had attended the use of Alabama coal at Pensacola. The Navy Department has been using the Tennessee Company's Old Pratt screened steam lump coal since early in February, 1913. In 1914 a considerable tonnage of this coal was supplied through Pensacola to the United States battleship Mississippi, and the Navy Collier Brutus carried 5000 tons of coal for delivery to ships of the Navy and War departments at Vera Cruz and Galveston. In 1913, Merritt & Co., agents for the Old Pratt coal, were awarded an annual

contract for a minimum of 10,000 tons and a maximum of 30,000 tons of Old Pratt screened steam lump, which contract was handled successfully.

An error was made in the first advices sent out from Washington to the effect that the Pratt Consolidated Company had secured some of the Pensacola business. That was owing to the confusion with the Pratt coal of the Tennessee Company. However, the Pratt Consolidated in 1915 furnished quite an amount of its Pratt steam coal for revenue cutters and other purposes at Mobile, and has supplied the Government with much coal at different times both for land and water uses at New Orleans.

The use of the coals of the Tennessee Company at Pensacola has come without special activity on the part of that concern. It was not among the operators who urged the Alabama Congressmen and Senators this spring to renew the campaign for Government use of Alabama coals. The Tennessee Company, since it was absorbed by the United States Steel, never joins in efforts to influence or bring pressure on legislators.

29,000 ACRES TO BE DRAINED.

Construction Progressing on Drainage District in Columbus County, North Carolina.

By October the Columbus County Drainage District No. 2, at and near Bolton, Columbus county, N. C., is expected to be completed. Outlining this development, F. L. Finkemstaedt, chairman Board of Drainage Commissioners, Bolton, writes to the MANUFACTURERS RECORD:

"About 29,000 acres will be drained and about 1,500,000 yards of earth will be excavated. The district has a main canal and nine laterals, which aggregate about 42 miles in length. The canals vary in cross-section from a bottom width of 14 feet and depth of 7 feet to a bottom width of 30 feet and depth of 9 feet. The work is being done with floating dipper dredges. There will be about 42 miles of road on the ditch bank, which will be finished about 16 feet width, though there will be plenty of material to make these roads wider when necessity demands. The district will have eleven 30-foot bridges and three 50-foot bridges. The land within the district is owned largely by the Waccamaw Lumber Co. and the North Carolina Company. The superintendent of construction is W. Worth Bean, Jr., Bolton. The contract was originally let to an engineering and contracting company, but during November last it was found desirable that I take the work over as trustee, and since that time I have been pushing the work to completion."

\$75,000 Molasses Barge Ordered.

Contract to build a \$75,000 steel barge for the Boston (Mass.) Molasses Co. has been received by the Merrill-Stevens Company, Jacksonville, Fla. This is the Jacksonville company's fifth large contract within the past several months, these orders now totaling more than \$1,000,000. The barge will be of steel, 139 feet long and 133 feet between perpendiculars, beams being 25 feet, with molded depth of 9 feet. It will be driven by steam engines and have a capacity of 60,000 gallons of molasses. Two other barges, costing \$65,000 each, will be built at the Merrill-Stevens yards for the Cuba Distilling Co. of Havana. A lightship for the United States Government and a big freight vessel, costing \$250,000, for the Southern Steamship Co., are two other large contracts of the Merrill-Stevens plant.

Developing Alabama Graphite Properties.

Birmingham, Ala., June 15.—[Special.]—The Great Southern Graphite Co. has been organized here with a paid-in capital of \$2000 and privilege of increasing to \$100,000, which will be done at once, to develop the 78 acres it controls in Clay county, Alabama. Its officers are: H. O. Moore, president; J. P. H. De Windt of New York, vice-president; F. J. Hallberg, secretary.

According to Mr. Moore, it is proposed to build at once in Clay county a 100-ton unit of the ultimately proposed 500-ton mill, which will refine the graphite ore. This mineral is said to be found on the property in practically unlimited quantities in its natural state. There are several other important graphite concerns already operating in Clay county.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW RAILROAD TO KENTUCKY COAL.

Baltimore & Ohio Will Build Its Second Line to Elkhorn Mines.

Construction of an important line to new coal mines in Kentucky will soon be started by the Baltimore & Ohio Railroad Co. Bids will be opened June 23 to build the Long Fork Railroad from a connection with the Chesapeake & Ohio Railway in Floyd county at the forks of Beaver Creek, the route being southward up the left fork of that stream to its headwaters at Weeksbury, in Knott county, a distance of 26 miles. The new line, which will be single-tracked and built for heavy traffic, will have five tunnels, ranging from 140 feet to 775 feet long. It is expected that the contract will be placed immediately after the bids are received, as it is desired to begin and expedite the work to reach a large area of coal lands upon which development has begun. Construction will be under the direction of Francis Lee Stuart, chief engineer of the Baltimore & Ohio.

Weeksbury is a new town established by the Elkhorn Gas Coal Mining Co., which is building an extensive mining plant there and will be prepared to ship out large quantities of coal as soon as the railroad facilities are provided. Preparations for this construction have been under way for some time, several parties of engineers having gone over and thoroughly investigated a route during the last five years. The beginning of the line will be at a point on the Chesapeake & Ohio Railway 10 miles south of Prestonsburg, Ky., and about 30 miles north of Shelby, at which latter point the Baltimore & Ohio already has another detached line which runs into the Elkhorn field of the Consolidation Coal Co. The coal from the Long Fork line now to be built will be taken to market over the Chesapeake & Ohio and Baltimore & Ohio lines, as is the coal taken out over the Sandy Valley & Elkhorn, which is the name of the older coal mine railroad. Some of this coal, and maybe much of it, will go to the Great Lakes over the Cincinnati, Hamilton & Dayton road, which is controlled by the Baltimore & Ohio.

In this connection it is important to note that the Baltimore & Ohio made surveys some time ago for a line from Kenova, W. Va., along the Big Sandy Valley, practically paralleling the Chesapeake & Ohio Railway, with the idea, it is understood, that some day a double track through the valley to get out the coal rapidly might be necessary. There has not as yet, however, been any announcement of an official nature covering this plan.

Tunnel Improvements at Baltimore.

The Pennsylvania Railroad has begun the improvement of the Baltimore & Potomac tunnel at Baltimore, plans for which were announced in February. The contract is let to the McMullen & Melvin Company of New York, and the work, as heretofore stated, will include lowering the tracks two feet six inches to complete the construction of the invert which was begun some years ago. Then the tracks will be laid upon a concrete base, as was done in building the Pennsylvania Railroad tunnels which enter New York city. In addition to these changes in the tracks, the side walls of the tunnel will be cut back so as to provide additional clearance for trains and a distance of 12½ feet from center to center of tracks will be established.

This tunnel, which is about a mile and a half long, extends from the Union Station yard to Fulton Station.

It was completed and opened for service June 29, 1873. Some years ago the great increase of traffic compelled the installation of ventilating chimneys and fans to clear the tunnel of smoke. At first only one chimney was used, but several years later a second one was built. The improvements now undertaken will, it is understood, relieve the traffic conditions satisfactorily, the capacity of the tunnel as it exists having been reached.

During the improvements a number of trains of the Western Maryland Railway, and maybe some of the

Pennsylvania trains, will be detoured around the western part of Baltimore by way of the Green Spring Valley branch of the Pennsylvania road to the Western Maryland Railway at Green Spring Junction; thence trains can proceed either west or south as may be necessary. New signals have been installed on the single track of the branch to provide for the safe and expeditious handling of the additional business thus placed upon it. It will take about two years to complete the tunnel improvements.

Earnings of Baltimore-Washington Electric Line.

The Washington, Baltimore & Annapolis Electric Railroad Co. reports for May as follows: Operating revenue \$77,752, increase as compared with the same month of last year \$4139; operating expenses \$40,048, increase \$171; net operating revenue \$37,704, increase \$3968; total operating revenue \$38,850, increase \$3993; operating income after taxes \$34,900, increase \$3450; gross income \$36,002, increase \$3417; net income after deductions \$14,294, increase \$3033; per cent. of railway operating expenses to railway operating revenue 51.51, decrease 2.67.

For the first five months of the current year the figures are thus: Operating revenue \$551,192, increase as compared with the same period of last year \$24,116; operating expenses \$197,210, increase \$2369; net railway operating revenue \$153,981, increase \$21,747; net operating revenue \$161,031, increase \$22,690; operating income after taxes \$141,555, increase \$19,528; gross income \$146,871, increase \$19,042; net income after deductions \$39,192, increase \$18,510; per cent. of railway operating expenses to railway operating revenue 56.01, decrease 3.52.

Norfolk Southern Acquires Road.

A report from Kinston, N. C., says that the Norfolk Southern Railroad has acquired from the Kinston Manufacturing Co., J. T. Deal, president, the railroad running south from Pink Hill to Beulaville, N. C., 12 miles, and has conveyed to the Kinston Manufacturing Co. the lumber mill at Kinston, which the latter leased. The railroad connects at Kinston with the Kinston-Carolina Railroad, a branch of the Norfolk Southern, and is controlled by the same interests. An extension was begun last year from Beulaville to Chinquapin, nine miles, and it was further proposed to later extend this 10 miles more to Maple Hill, which may be done ultimately. There has been talk of building the line down into Pender county for some time.

New Equipment, Etc.

Baltimore & Ohio Railroad will build 500 refrigerator cars.

Missouri, Kansas & Texas Railway is in the market for 500 cars.

Western Maryland Railway has ordered 5000 tons of rails from the Maryland Steel Co.

Arkansas & Louisiana Midland Railway is reported in the market for new passenger equipment.

Columbus (Miss.) Railway, Light & Power Co. has bought 3 double-truck trolley cars.

Southern Railway has ordered 5000 tons of rails from the Illinois Steel Co., Chicago.

Seaboard Air Line is reported contemplating the purchase of 10 Mallet type locomotives.

Railroad Notes.

The Norfolk & Western Railway hauled during May a total of 3,094,208 tons of coal.

The connection between the Alabama & Mississippi and the Pascagoula, Moss Point & Northern railroads is to be completed, according to an official statement, by the end of June, when trains will be operated through between Vinegar Bend, Ala., and Pascagoula, Miss.

New Memphis Bridge Soon to Be Used.

Use of the new railroad and highway bridge of the Arkansas & Memphis Railway Bridge & Terminal Co.

over the Mississippi River at Memphis, Tenn., is expected to begin by the railroads on July 1, but it is said that several months will elapse before the highways will be connected up with the wagon roadway on the bridge and the structure will be wholly completed. The Business Men's Club Chamber of Commerce at Memphis proposed to hold an early celebration of the opening of the bridge, but because of the fact that it will not really be finished until the fall it was decided to postpone the function until September or October. The Rock Island lines, the Missouri Pacific-Iron Mountain system and the St. Louis Southwestern Railway will use the bridge, which they jointly built.

Great Increase in Coke Production in 1915.

According to the United States Geological Survey, the amount of coke made in the United States in 1915 was 41,581,150 short tons, an increase of 7,025,236 tons, or 20 per cent., over 34,555,914 tons in 1914, and within 5,000,000 tons of the record output of 1913. Of this total, 34 per cent., or 14,072,895 tons, was by-product coke, and 66 per cent., or 27,508,255 tons, was made in beehive ovens, the increase in the output of by-product coke being 25 per cent. and in beehive 18 per cent.

From the accompanying table it is seen that the South is not measuring up to its opportunity. All the Southern States listed in the table, with the exception of Kentucky, which reported a gain of 18.5 per cent., show a decrease in the 1915 production over the figures for 1914, while the States outside of the South, excepting Massachusetts, all register increases.

The production of coke in Virginia declined 151,177 tons, or 19.4 per cent.; Georgia had a loss of 4478 tons, or 18.3 per cent.; Tennessee produced 7154 tons, or 2.7 per cent. less; West Virginia had 36,516 tons, or 2.6 per cent. less, and Alabama, which ranks second to Pennsylvania in coke produced, showed a loss of 12,338 tons, or 4 per cent.

Of the States outside of the South, Pennsylvania reported a gain of 5,364,469 tons, or 20.5 per cent., and was closely followed by Indiana with an increase of 491,477 tons, or 21.6 per cent., but the State of Washington reported the highest percentage of gain, 60.8 per cent., followed by New York with 49.7 per cent. and Ohio with 31.3 per cent.

COKE PRODUCTION IN THE UNITED STATES, 1914 AND 1915.

State.	Coke (Short Tons).		In-crease.	Percent- age In-crease.
	1914.	1915.		
Alabama	3,084,149	3,071,811	-12,338	-0.4
Colorado	696,093	670,938	-25,155	-3.6
Georgia	24,517	20,039	-4,478	-18.3
Illinois	1,425,168	1,686,998	261,830	18.4
Indiana	2,276,552	2,768,069	491,447	21.6
Kentucky	443,359	526,097	82,738	18.5
Maryland	•	313,283	•	•
Minnesota	•	127,847	•	•
New Jersey	255,283	•	•	•
New Mexico	362,572	389,411	26,839	7.4
New York	457,370	684,461	227,091	49.7
Ohio	521,638	684,658	163,020	31.3
Pennsylvania	29,258,393	34,622,862	5,364,469	20.5
Tennessee	264,127	256,973	-7,154	-2.7
Virginia	789,984	638,807	-151,177	-19.4
Washington	84,323	136,552	51,629	60.8
West Virginia	1,427,982	1,381,446	-46,536	-3.2
Other States	22,222,134	22,559,568	337,434	1.5
Total	34,555,914	41,581,150	7,025,236	20.3

— Decrease.

* Maryland, Massachusetts, Michigan, Minnesota, Utah and Wisconsin combined.

† Massachusetts, Michigan, Missouri, New Jersey, Utah and Wisconsin combined.

"An encouraging feature of the year's record," states the Geological Survey, "was that the quantity of by-product coke made in 1915 was the greatest yet recorded, exceeding the output of 1913 by 1,358,195 tons. Three-fourths of the by-product plants reported an increase in output, and four new plants began production during the year, one each in Cambria, Pa.; Duluth, Minn.; St. Louis, Mo., and Chattanooga, Tenn. The total number of by-product ovens in operation in 1915 was 5481, against 5142 in 1914. The number of beehive ovens in operation in 1915 was 49,540, as against 49,496 in 1914. The increase of 18 per cent. in the production of beehive coke from practically the same number of ovens indicates more continuous operation during the past year."

Arms Company Seeks Capital.

John C. Febinger, Jr., of the Febinger Arms Co., Ltd., New Orleans, seeks capital for the manufacture of a patented army shoulder automatic rifle.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Record of Week's Progress in Improvements in City and Country.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Brooksville, Ky.—Bracken county voted \$200,000 bonds to construct roads.
 Cadiz, Ky.—Trigg county voted \$150,000 bonds to construct roads.
 Clarksdale, Miss.—Coahoma county will issue \$396,000 road bonds.
 Corsicana, Tex.—Navarro county voted \$180,000 bonds for road construction.
 Covington, Va.—Alleghany county voted \$100,000 bonds to improve roads.
 Fayetteville, W. Va.—Fayette county voted \$175,000 bonds for road construction.
 Miami, Fla.—Dade county voted \$40,000 bonds to construct oiled roads.
 Mt. Vernon, Tex.—Franklin county voted \$75,000 bonds to construct roads.
 Okolona, Miss.—Chickasaw county voted \$33,000 bonds for road construction.
 Quitman, Tex.—Wood county will issue \$50,000 bonds to construct roads.

Bonds to Be Voted.

Belton, Tex.—Bell county votes July 19 on \$6000 bonds to improve roads, etc.
 Moss Point, Miss.—City votes July 4 on \$6000 bonds for street improvements.
 Perry, Fla.—Taylor county votes July 25 on \$600,000 bonds for road construction.
 Sinton, Tex.—San Patricio county votes July 8 on \$80,000 road bonds.
 Taylor, Tex.—City votes July 3 on \$50,000 bonds for street paving.

Contracts Awarded.

Athens, Tex.—Henderson county awarded contract for 40 miles of sand-clay road.
 Baltimore, Md.—City awarded \$6733 paving contract.
 Bradentown, Fla.—Manatee county awarded \$208,668.05 contract for road construction.
 Clarksdale, Miss.—City awarded contract for 95,000 square yards concrete slab paving.
 Concord, N. C.—City awarded contract to construct 4000 yards cement sidewalks.
 Dunn, N. C.—City awarded contract for 40,000 square yards sheet asphalt paving; \$55,000 available.
 Flemingsburg, Ky.—Fleming county awarded contract to reconstruct turnpike; cost \$10,000.
 Greenwood, Miss.—City awarded \$16,517 paving contract.
 Houston, Tex.—Harris county awarded \$13,000 contract to surface 5½ miles of road.
 Independence, Mo.—Jackson county awarded \$73,952 contract to grade and macadamize five miles of road.
 Joplin, Mo.—City awarded \$14,111.64 contract for street improvements.
 La Grange, Ky.—Oldham county awarded contract for six miles of road improvements.
 Liberty, Tex.—Liberty county awarded contract to construct sand-clay roads; \$60,000 available.
 Louisville, Ky.—Jefferson county awarded \$19,911 contract for road construction.
 Sedalia, Mo.—City awarded contract for 5500 square yards concrete paving and 4000 linear feet of concrete curb.
 St. Charles, Mo.—St. Charles county awarded \$8400 contract for road construction.
 Upper Marlboro, Md.—Prince George's county awarded contract for 1.12 miles of State-aid highway; cost \$13,000.

Contracts to Be Awarded.

Athens, Tex.—Henderson county will construct roads; expend \$50,000.
 Corinth, Miss.—Alcorn county will build 15 miles of gravel road.
 Danville, Ky.—City receives bids until July 4 to construct 7000 square yards asphalt paving.
 Dothan, Ala.—Houston county receives bids until July 10 to construct 20 miles of road.
 Elkins, W. Va.—Randolph county receives bids until July 1 to construct 19 miles of roads and streets.
 Gate City, Va.—Scott county will macadamize 14.3 miles of road and grade 5 miles.
 Joplin, Mo.—City will pave streets at a cost of \$26,581.79.
 Midland, Md.—City receives bids until June 22 to grade and pave 1600 feet of street.
 Mt. Sterling, Ky.—City asks bids July 5 on 8600 square yards asphalt, vitrified block on concrete foundation, bitulithic or tarvia paving with concrete curb and gutter.
 Roanoke Rapids, N. C.—City will grade and lay granolithic sidewalks.
 Rustburg, Va.—Campbell county will construct 20 miles of bituminous and water-bound macadam road; \$200,000 available.
 Sand Springs, Okla.—City will construct street paving to cost \$60,000.
 Savannah, Ga.—Chatham county will construct one mile of concrete road to cost \$6000.
 Stuttgart, Ark.—City will construct 47,800 square yards concrete, bituminous or macadam pavement.
 Williamsburg, Ky.—Whitley county will construct 15 to 18 miles of limestone water-bound macadam road.

Eastern Route for Forrest Highway Has Been Selected.

Birmingham, Ala., June 16.—[Special.]—Directors of the Forrest Highway have decided on the eastern route of the highway from Montgomery on to the Gulf. Extending from Rome, Ga., on the Dixie Highway, to Pensacola, Fla., on the Gulf, it will pass through Gadsden, Birmingham, Montgomery, Andalusia and Brewton. Based on the interest and co-operation shown in the work now in progress and that has been promised, it is expected that within a few months there will have been completed an unbroken chain of serviceable road from the Dixie Highway connection, in Georgia, to the Gulf, giving a line 700 miles in length. The road between Rome and Gadsden and St. Clair Springs is rapidly being put into condition, and contracts have been let for important lengths in the highway south of Andalusia. The two contesting routes was the one between Montgomery and Pensacola via Andalusia and Brewton, and the other between Montgomery and Mobile via Monroeville. The former was known as the eastern route and the latter as the western.

Extensive Public Improvements for South Texas Counties.

Corpus Christi, Tex., June 17.—[Special.]—Due to nine months' dry weather and the consequent failure of crops a number of South Texas counties are taking advantage of the dull season to provide needed public improvements and thus furnish employment for the idle farmers and other labor. In all of the work only home labor is being employed, farmers living on rented lands being given the preference. Kingsville, the capital of Kleberg county, on June 24 will vote on \$150,000 bond issue for buying the waterworks now owned by a private concern and constructing a modern distributing system to all parts of the city. A price of \$20,000 has been agreed upon for the plant, and the remainder of the bond issue will be spent for mains and other additions. The work will be under the direction of the City Council and without a contract. Corpus Christi on Saturday, July 8, will vote on \$150,000 bond issue for additional street paving. The bonds will pay the city's one-fourth pro rata share, abutting property-owners paying the remaining three-fourths, thus making a contract total nearly \$400,000. Home labor only will be employed. Practically no oppo-

sition to the bond issue exists, and a nearly unanimous vote is expected.

San Patricio county on July 8 will vote on a \$150,000 bond issue for a good-roads system throughout the county, and with the stipulation that the farmers are to be given the work. Here also there is but little opposition, and it seems assured that the issue will carry.

Aransas Pass road district is spending \$75,000 for good roads, nearly 100 men who live in the district having employment that will last for another four months. The money was secured by voting bonds.

Aransas county is spending \$20,000 from the county funds in building a modern road from Rockport to Aransas Pass, a distance of 10 miles, and only home labor is being employed. It is expected that by July 1 legal difficulties now existing will be removed and that Aransas county will be able to proceed with the building of the \$350,000 causeway for which bonds were recently voted.

Thus work costing approximately \$1,200,000 is being either carried forward or arranged for in the four counties, and the funds will go a long way in furnishing labor for those who have been thrown out of work by the dry weather.

Paving a Busy Jacksonville Street.

By J. E. BALLENGER, Engineer of Highways, Jacksonville, Fla.

Bay street, from Broad street to Myrtle avenue, a distance of approximately 3500 feet, is one of the principal heavy-traffic streets of this city. The Union depot, express office and a large freight warehouse are located on this street, and the majority of the tenants are wholesalers and machinery men.

On account of the restricted street width, it was impracticable to obtain more than a 40-foot width of roadway, and as a portion of this street is occupied by a double-track street railway, it is easily understood that this condition is not all that could be desired for properly handling traffic.

The pavement was laid by the Alabama Paving Co. of Birmingham, Ala., R. L. Lacey being the superintendent in direct charge. It was put down under city of Jacksonville specifications, and materials and workmanship have been entirely satisfactory. The concrete base is six inches thick, and the aggregate is composed of "Old Dominion" cement, local river sand and slag, mixed in the following proportions: one part cement, three parts sand, five parts slag. The brick surface was laid on a dry cement-sand cushion, mixed one to four, with a minimum allowable thickness of one-half inch.

Wire-cut lug brick, manufactured by the Southern Clay Manufacturing Co. of Chattanooga, Tenn., were used for the wearing surface, and grouted with a cement-sand grout, mixed in equal parts. The grout was mixed with Altamaha River sand, as tests have shown this sand to be free from the salt coating sometimes found in our local sand.

Expansion was provided for by means of "Elastic" expansion joint made by the Philip Carey Company, Cincinnati, O., one-half-inch strips being laid adjacent to the curb and one-inch pieces transversely at 50-foot intervals.

The contract price on the job was 83 cents per square yard for six-inch concrete base, and \$1.60 per square yard for the grouted wearing surface, including the cement-sand cushion.

Owing to traffic conditions, it was impracticable to work both sides of the street at once, and even the intersections were paved one-half at a time.

The pavement ordinarily was allowed nine days to set, but in some cases driveways were sanded and boarded and thrown open to traffic 24 hours after being grouted. These show no bad effects whatever from this treatment.

E. R. Neff, assistant engineer, was in direct charge of the paving of this street.

\$248,518 Road and Bridge Contracts.

Manatee County Commissioners, Bradentown, Fla., have awarded two highway and bridge contracts totaling \$248,518.05, bids having recently been invited. The Continental Public Works Co., New York, has the highway contract at \$208,668.05, providing for asphaltum surface roads on concrete and sand base, with curbs

and gutters, in Sarasota-Venice Road District. The Lutten Bridge Co., York, Pa., has contract at \$39,850 for the bridges, which will be of reinforced concrete.

Road Photograph Prize Contest.

In order to secure for the National Highways Association good photographs of roads constructed in all parts of the country, Gen. Coleman Du Pont of Wilmington, Del., and Charles Henry Davis of South Yarmouth, Cape Cod, Mass., have offered \$2600 to be divided in 166 cash prizes for such photographs.

The photographs will be judged first upon their merit in showing road conditions, good or bad; second, pictorial interest, and third, photographic excellence. Anyone may become a competitor. It is not required that competitors be members of the association, and no preference will be given members over non-members in awarding prizes.

A contestant may submit any number of photographs, any one or all of which may receive a prize. All photographs receiving prizes will become the property of the association, with full legal title and copyright.

The full name and full address of each contestant must be placed upon the back of each photograph submitted. The contest will close at noon November 7, 1916.

Photographs are to be judged by Col. Theodore Roosevelt, Mr. Mark Sullivan and Miss Ida M. Tarbell.

All photographs for this contest must be addressed "Good Roads Everywhere," Photograph Contest, National Highways Association, Washington, D. C.

\$600,000 Road and Bridge Bonds.

Taylor County Commissioners, Perry, Fla., have ordered an election July 25 to vote upon issuing \$600,000 bonds for highways, with accompanying bridges and culverts. Their plans contemplate, upon an affirmative vote of the bonds, constructing 24 miles of brick roads and 65 miles of asphaltic concrete roads, the accompanying bridges and culverts to be built of steel and concrete.

90 Miles of Highway.

Monroe County Commissioners, Madisonville, Tenn., have awarded contract to Wilkerson & Marcum, Lenoir City, Tenn., for macadamizing and chert surfacing 90 miles of highway and for 75 miles of grading. They are issuing bonds for \$325,000, of which \$150,000 have been sold and \$175,000 will be sold as the work progresses.

Vigorous Work in Behalf of Muscle Shoals Location for Government Nitrate Plant.

Nashville, Tenn., June 16.—[Special.]—Following up the vigorous initiative taken by Nashville recently in the move to secure the location of the proposed \$20,000,000 Government nitrate plant at Muscle Shoals, on the Tennessee River, a joint convention of citizens of this section of the South has been called to meet at Nashville June 14. A committee of the Commercial Club of Nashville, having arrangements in charge, will work to arouse a lively interest in the States of Tennessee, Alabama, Georgia, Mississippi and Arkansas.

Heartily co-operation by the commercial organizations of Birmingham, Chattanooga and Memphis has been assured. Each of these organizations will work among the people of the immediate section. To Nashville has been assigned middle Tennessee, central and eastern Kentucky and eastern Mississippi. To Memphis, Arkansas, western Kentucky and west Tennessee and the remainder of Mississippi, while to Chattanooga was given east Tennessee and to Birmingham the State of Alabama.

Newspaper publicity and personal appeals to mayors, bank presidents, State politicians and other prominent citizens through letters and interviews, will be employed to arouse the people of the whole section. A great attendance of enthusiastic workers is designed, so that the convention's stand in favor of the Muscle Shoals location may have the greatest possible weight with the administration when the question of selecting a site is reached.

TEXTILES

Big Silk Mill for Roanoke.

The MANUFACTURERS RECORD has received authoritative advices detailing plans for the big silk mill mentioned last week as to be built at Roanoke, Va. It is understood that an ultimate investment of \$1,000,000 is contemplated and plans for the initial mill have been completed, building contracts to be awarded this week. The Viscose Company, A. C. Ernst, general manager, and J. C. Clayton, chief engineer, Marcus Hook, Pa., will build the plant, and Ballinger & Perrot of Philadelphia are the architects-engineers in charge. An equipment of machinery will be installed for a weekly capacity of 40,000 pounds of artificial silk.

The plans and specifications include the following important details: Five-story 153x77-foot building, with columns, floors and roof of reinforced concrete (flat slab construction), rolled steel windows and freight elevator; one-story 536x140-foot building (brick walls and shed construction), with roof of saw-tooth skylights, and cast-iron columns and steel trusses, with plank roof covered by composition roofing; three-story 166x58-foot building of reinforced concrete, flat slab construction similar to five-story structure; two-story-and-basement 154x143-foot and 103x73-foot structures (two) with brick walls and generally of reinforced concrete construction, with composition roofing; 108x70-foot powerhouse, with brick walls and overhead coal bunkers; 191-foot radial brick chimney, 11½ feet inside diameter; 1,077,000-gallon concrete reservoir. Contractors invited to bid are: Barbour & Sons and E. N. Nerrenden, both of Roanoke; John P. Pettyjohn and C. W. Hancock & Sons, both of Lynchburg, Va.; Irwin & Leighton, 12th and Cherry streets, Philadelphia; William Provost, Jr., Chester, Pa.

\$150,000 Knitting Company Organized.

The Signal Knitting Co., Chattanooga, has organized and decided to construct a reinforced concrete mill building, contract for which has been awarded to A. F. Hahn, while W. H. Sears is the architect, both of Chattanooga. Knitting machinery for underwear production will be installed. W. A. Jones is president-treasurer and Floyd Murphy is vice-president and secretary. This corporation was recently chartered with \$150,000 capital stock.

\$200,000 Bleaching and Mercerizing Plant.

An investment of \$200,000 for building a bleaching and mercerizing plant for textiles is proposed by the Yarkin Bleaching Co., Salisbury, N. C. This company has been organized with officers as follows: D. P. Campbell, president, New York; T. C. Love, first vice-president, Gastonia, N. C.; M. L. Jackson, second vice-president; N. B. McCannless, secretary and treasurer; both of Salisbury. The organizers of the company are mainly cotton manufacturers who ship their products to be finished.

12,000-Spindle Yarn Mill Addition.

An equipment of 12,000 spindles has been decided upon for the Johnston Manufacturing Co.'s additional yarn mill, mentioned in May. This new Charlotte (N. C.) mill will be of fireproof construction, three stories high, 128 feet long by 78 feet wide, according to plans and specifications by R. C. Biberstein of Charlotte. S. Oates, also of Charlotte, has the building contract.

\$34,465 Cotton Twine Equipment.

The State Board of Affairs has decided upon machinery for the State penitentiary cotton twine mill at Oklahoma City, and a \$34,465 equipment has been ordered. This machinery will be furnished by the Watson Machinery Co. of Paterson, N. J., and its daily capacity will be 12,000 pounds of cotton twine.

Textile Notes.

E. C. Johnson, North, S. C., may establish a mill to spin cotton yarn, and wants information regarding the cost of the required machinery.

W. B. Clements, vice-president of the Merchants' Bank, and C. A. Adams, Durham, N. C., will build a mill for knitting cotton hosiery.

The Fidelity Hosiery Mills Co., Newton, N. C., will add 50 knitting machines, and has purchased this new equipment. Its daily capacity will be increased from 600 to 800 dozen pairs of hose.

The Southern Textile Co., Greenville, S. C., has been chartered with a capital of \$25,000. B. M. Graves is president, Claude Ramseur is vice-president and treasurer, and K. L. Jones is secretary.

The Reidsville (N. C.) Hosiery Mills has been organized by A. V. Victorius & Co. and Bernard Bandler & Sons, all of New York. This company will build a 105x44-foot mill and install 50 knitting machines with accompanying equipment, driven by electric power. It will obtain its electricity from the Reidsville transmission system of the Southern Power Co. of Charlotte.

Additional new machinery, including 1800 spindles and 80 looms, has been installed by the Delgado Mills, Wilmington, N. C. The company has also generally overhauled its spinning, weaving and dyeing departments. Contract for the spinning equipment was awarded to the Howard & Bullough American Machine Co., Pawtucket, R. I., and for the weaving machinery to the Crompton & Knowles Loom Works, Worcester, Mass.

Rebuilding Operations at Augusta.

Augusta, Ga., June 16.—[Special.]—Rebuilding the district burned by the great fire of March 22, Augusta is getting under way. Besides that in the burned district, there is much construction activity in other sections of the city.

Since March 22, according to Lombard Brinson, secretary of the Merchants' and Manufacturers' Association, 401 building permits had been taken out prior to June 1, all of which complied with the new building code adopted by the City of Augusta since the fire. Of the 401 permits issued, 21 were for frame, 14 for brick and 2 for concrete, in April, and in May 35 were for frame and 24 for brick buildings. The remainder were for alterations and repairs. The cost of the buildings, alterations and repairs for which permits were issued during April totaled \$125,533, and for May \$225,347.67.

The first home to be reconstructed and occupied in the burned district was that of A. H. Holmes, at 135 Greene street, occupied June 1.

One of the larger reconstruction plans definitely announced recently is that of the Real Estate Development Co., which proposes to erect between the Empire and Chronicle buildings on Broad street a combination theater, store and office building, with a 3300-bale capacity warehouse in the rear, facing on Reynolds street. The cost of the development will approximate \$100,000. G. Lloyd Preacher is the architect.

Mr. Preacher also is drawing plans for a parsonage for the St. James Church; will soon ask for bids on an apartment-house to be built on Greene street, and plans are under way for a residence for Dr. T. L. Davis on Hickmen road, the combined cost of all developments being between \$30,000 and \$40,000.

Work is soon to begin on several of the more substantial homes, according to Mr. Brinson, on lower Broad, Greene and Telfair streets.

For Gibraltar and Morocco Markets.

Solomon L. Balensi, Gibraltar:

"I work as representative for accounts of manufacturers and exporters under a commission, and I carry on a considerable trade in Gibraltar and Morocco markets, having my own agents in the Moroccan markets, who exclusively work the firms I represent. As I deal in all lines of business excepting machinery, I shall be pleased to be put in touch with some reliable firms willing to entertain my proposal of agency for the Gibraltar and Morocco markets."

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

\$800,000 PLANTS TO USE WASTE LUMBER PRODUCTS.

New Enterprises to Be Built by Great Southern Lumber Co.

A pulp mill with a daily capacity of 60 tons and a container liner mill with a daily capacity of 100 tons will be built at a cost of \$800,000 at Bogalusa, La., by the Great Southern Lumber Co., according to a telegram from that company to the MANUFACTURERS RECORD.

The buildings will have brick walls and be of creosoted timber factory construction, costing about \$200,000, and the machinery will cost about \$600,000. The pine waste of the company's lumber mill will be the raw material for manufacturing the pulp and the box paper. This will be the second factory the company has built to utilize its waste materials.

The Great Southern Lumber Co., operating the largest mill in the South, with a daily capacity of about 1,000,000 feet, has been steadily expanding its operations and utilizing its hitherto waste products as a basis for the establishment of new industries.

This investment of \$800,000 is typical of the work that the company has been doing.

Improved Market Conditions Expected in New Orleans.

New Orleans, La., June 19—[Special.]—Lumbermen believe that the long-expected turn in the market has come, and that quickening demand and stiffer prices may be expected from now on.

The bottom point in demand was reached during the week ending June 5, when orders received were only 3272 cars for the yellow pine mills in the Southern Pine Association.

The week ending June 12 showed 4300 cars ordered.

The relation of shipments to orders and the stocks on hands follows: Week June 5, orders, 3272 cars; shipments, 4426 cars; stocks left, 18,204. Week June 12, orders, 4300 cars; shipments, 4672 cars; stock left, 18,914. Week June 19, orders, 3759; shipments, 4387; left on hand, 17,697.

The normal average production of the 157 reporting mills of the association is 634,584 feet. The actual average production during the last week of actual report was only 584,184.

This means that the mills continue to follow the policy of taking what let-downs and delays occur without pressing to overcome the lost time.

The supply of rolling stock for shipments is still uneven, but in total runs fairly level with what it has been for some time past.

Save in package shipments, export and coastwise movement of timber has been practically negligible during the past week. Staves, packages of hardwood timbers, in broken lots, moved abroad.

Only one considerable shipment of lumber went into Latin America, being one of 184,000 feet to Santiago de Cuba.

Wood Distillation Census.

General results of the census of the wood distillation industry in the United States are given in the Census Bureau's summary of reports received from 101 establishments in 1914 which are compared with statistics compiled from 136 establishments in 1909. This reduction of 35 establishments in five years is said to be due in part to a difference between the methods of reporting at the two censuses and not to any great decline in the industry. Most of the establishments are located in the North, 46 being in Pennsylvania and 20 in New York, while the South, producing over one-half of the country's lumber output, has only 15 wood distillation establishments out of a total of 101 for the entire country.

Of the total number of establishments reported for

1914, six were engaged primarily in other industries, but manufactured 867,230 gallons of crude and refined alcohol, valued at \$211,734, and 11,838,582 pounds of gray acetate of lime, valued at \$142,060, as subsidiary products. Also included in the total are 14 establishments which distilled turpentine from wood in 1914. However, the output of these 14 establishments, which produced in 1914, 575,557 gallons of turpentine, valued at \$194,183, constitutes but a small portion of the entire turpentine product of the country, which amounted to 27,648,939 gallons in 1914, against 20,605,822 gallons in 1909.

The total output of wood distillation products, including crude and refined wood alcohol, acetate of lime, charcoal, turpentine, acetone, formaldehyde, acetic acid, wood creosote, rosin, tar, etc., was valued at \$10,236,332 in 1914, an increase of \$20,331, or 0.2 per cent. over \$10,215,901 in 1909.

The accompanying table of comparative statistics on wood distillation in the United States enumerates the quantities and values of the different products produced in 1914 and 1909 and their percentages of increase or decrease during the five-year period.

Wood Distillation.	1914. ¹	1909. ¹	Per cent. of increase (+) or decrease (—) 1909-1914.
Number of establishments...	101	136	-25.7
Products.			
Total value.....	\$10,236,332	\$10,215,901	+0.2
Wood alcohol (for sale):			
Crude—			
Gallons.....	7,196,975	6,772,709	+6.3
Value.....	\$1,605,880	\$1,774,459	-9.5
Refined—			
Gallons.....	6,216,727	6,732,877	-7.7
Value.....	\$2,709,369	\$3,096,806	-12.5
Acetate of lime:			
Pounds.....	164,483,854	141,478,296	+16.3
Value.....	\$2,138,909	\$2,118,443	+0.9
Charcoal:			
Bushels.....	39,184,475	39,017,247	+0.4
Value.....	\$2,709,369	\$2,551,644	+6.6
Turpentine:			
Gallons.....	575,557	706,868	-18.6
Value.....	\$194,183	\$249,526	-22.2
Other wood-distillation products (acetone, formaldehyde, acetic acid, wood creosote, rosin, tar, etc.), value.....	\$852,590	\$357,290	+138.6
All other products, value.....	\$227,498	\$267,731	-15.0

¹Includes, for 1914, number and output of six establishments which were engaged primarily in other industries, but which manufactured 867,230 gallons of crude and refined wood alcohol, valued at \$211,734, and 11,838,582 pounds of gray acetate of lime, valued at \$142,060, as subsidiary products; and for 1909, number and output of 16 similar establishments which made 869,658 gallons of crude and refined wood alcohol, valued at \$341,880, and 9,336,854 pounds of acetate of lime, valued at \$137,223.

Lumber News from New Orleans.

New Orleans, La., June 19—[Special.]—Lumbermen in Louisiana have had their attention turned during the week to the activities of the State legislators in Baton Rouge, where amendments to the workingmen's compensation law are being debated, and where increases in the production license tax are urged by the Legislature.

There is also keen interest in the development of reforestation plans of the State Conservation Commission, and the counter suggestion that all forestry work of this commission be transferred to the department of forestry of the State University.

The proposed new production license tax on lumber, which is proposed in the Louisiana House of Representatives with the backing of the State administration, follows: Severing pine timber, 2½ cents per 1000 feet; severing oak and ash, 3 cents per 1000 feet; severing cypress, 4 cents per 1000 feet; severing all other timber, 2 cents per 1000 feet.

This applies, of course, to merchantable timber passing through mills, and not to mere cutting on property for private use. The measure applies for 1916, and would be applicable to this year's cut. It is just twice the present production tax, which has not yielded the anticipated revenue.

Local manufacturers are completing their plans to combat the proposed reclassification of lumber rates, involving a 5 per cent. increase upon the freight rates on dressed lumber.

The case comes up in Chicago July 10 before Commissioner H. B. Mayer. The Southern Pine Association is keeping its office force at work day and night completing the statistics upon which its case will be based. A considerable number of witnesses will be brought before the commissioner to urge the side of the manufacturers. The statistics will be framed to

show the percentage of dressed to rough lumber, and how much of a tax will be levied upon the lumber industry by the increase, especially on yellow pine. Hitherto the rates have been the same on rough and dressed.

Another postponement came in the long-delayed case of Albert Lemoire and E. E. Carriere, indicted in 1915 for alleged fraud in connection with their failure in 1914. The case had been set for Friday, June 16.

The Lemoire-Carriere firm were stove shippers, with connections throughout Europe, doing a great business out of New Orleans. They were charged with forging and "kiting" bills of lading and other commercial documents in their dealings with foreign and local business houses, and with having caused a loss here and abroad of approximately \$6,000,000. The alleged fraudulent bills of lading covered shipments supposed to have been made via the Vogeman and Susto-American lines.

The investigation leading to their arrest and indictment covered most of the great cities of Europe and the United States.

Thus far they have never been brought to trial.

50,000 Oak Ties for France.

Last week the Lamb-Fish Lumber Co. of Charleston, Miss., made the first shipment on its contract to furnish 50,000 oak railroad ties to the French Government. The initial shipment went by rail to Memphis and thence to Gulfport, Miss., there being loaded on a French steamship sailing direct to France. The next shipment will be made about September 1 by barges down the Yazoo and Mississippi rivers to New Orleans for loading on French vessels. About July 1 the company will begin to operate its mill day and night in order to meet this contract.

Secures Another Large Lumber Order.

Last week the Dowling-Shands Lumber Co. of Green Cove Springs, Fla., reported the sale of 6,000,000 feet of lumber to the Longleaf Pine Co. of New York, care of Carpenter & O'Brien Company, Jacksonville, Fla., delivery within three to four months. Added to that sale, J. B. Arnold, sales agent of the Dowling-Shands Company, reports the closing of another contract for supplying approximately 1,500,000 feet of dimension stock.

Gum Lumber Manufacturers' Meeting.

The semi-annual meeting of the Gum Lumber Manufacturers' Association will be held at the Chisca Hotel, Memphis, Tenn., June 24, 1916.

\$100,000 Glass Casket Factory.

Construction has begun upon the plant of the American Glass Casket Co. of Oklahoma City, recently incorporated with a capital stock of \$250,000. The plant will cost about \$100,000, and is being located at Ada, Okla., the product to be glass burial caskets, glass vitreous tile for decorating bathrooms, halls and other interiors of private and public buildings, and other glass articles.

This company owns 10 acres of land at Ada, a glass-sand bank comprising 26 acres located 18 miles from Ada, with sand deposit claimed to be 98½ per cent. pure, and has contracted for gas for fuel at three cents for the life of the field. Its officers are: A. F. Ballentine, president; T. C. Hamilton, vice-president, both of Blackwell, Okla.; W. L. Peck, secretary-treasurer, Oklahoma City.

The Cotton Movement.

In his report of June 16 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 321 days of the season was 11,936,876 bales, a decrease under the same period last year of 3,162,597 bales. The exports were 5,240,435 bales, a decrease of 2,771,781 bales. The takings were, by Northern spinners, 2,795,971 bales, a decrease of 180,703 bales; by Southern spinners, 3,658,111 bales, an increase of 694,938 bales.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Gadsden.—Etowah County Comms. and cities of Gadsden and Alabama City contemplate constructing concrete bridge over Black Creek, between Alabama City and Attalla; cost \$3000.

Ala., Mobile.—Mobile County Comms. let contract Hancock, Harbin & Hancock, of Mobile, at \$3093, to construct crescent timber bridge over Three-Mile Creek, on Conception St. Rd.; length 271 ft.; 18-ft. roadway; construction under supervision of Harry Fisher, County Highway Engr.

Ark., Malvern.—Hot Spring County Commissioners let contract Illinois Bridge Co., Chicago, Ill., at \$9990 to construct steel bridge across Ouachita River at Fisher's Ferry; J. R. Gilchrist, County Judge.

Fla., Bradenton.—Manatee County Commissioners invite plans and bids for construction of bridge across Manatee River, between Bradenton and Palmetto.

Fla., Bradenton.—Manatee County Commissioners, Robt. H. Roesch, Clerk, let contract Lutten Bridge Co., York, Pa., at \$39,850 construct reinforced concrete bridges; Chas. A. Browne, Dist. Engr., Sarasota, Fla., call for bids noted in April. (See Road and Street Work.)

Fla., Miami.—Dade County voted \$35,000 bonds to construct bridges; S. A. Belcher, Chrmn. County Comms. (Noted in May.)

Fla., Titusville.—Brevard County Comms. will issue \$40,000 bonds to construct portion of bridge over Indian River, opposite Cocon, Fla., to connect Merritt Island with mainland.

Ky., Morganfield.—Union County Fiscal Court, Morganfield and Crittenden County Court, Marlon, Ky., will construct bridge over Tradewater River, connecting 2 counties; cost \$25,000 to \$30,000.

La., Abbeville.—Vermilion Parish, Ward 3, let contract to Montague Bros., Abbeville, to construct concrete bridges; cost within \$15,000; W. B. Knox, Engr. (Lately noted.)

Mo., St. Charles.—St. Charles County Commissioners let contract Missouri Bridge & Iron Co., St. Louis, at \$3319 to construct steel bridge on Salt River Rd. over McCoy's Creek; Alfred Riske, County Highway Engr.; lately noted. (See Road and Street Work.)

S. C., Haynes.—Southern Ry., W. H. Wells, Ch. Engr., Construction, Washington, D. C., let contract to J. M. Hobbs, Greensboro, N. C.; to construct a number of overhead bridges between Haynes (S. C.) and Gainesville, Ga.

Tenn., Chattanooga.—Cincinnati, New Orleans & Texas Pacific Ry. bridge across Tennessee River is being constructed; W. W. Wells, Ch. Engr. Constr., Southern Ry., 1300 Pennsylvania Ave., Washington, D. C., advises: Contract let to M. C. Monday, Knoxville, Tenn., for masonry reconstruction; bridge to have 314-ft. span, 300-ft. clear channel; steel work for this new span let to American Bridge Co., 30 Church St., New York. (Noted in Apr., American Bridge Co. having contract for portion of work.)

Tenn., Knoxville.—Knox County Road Commission let contract W. L. Brady to construct concrete culverts at Island Home and Fountain City.

Tenn., Knoxville.—Knox County Good Roads Com. will build concrete bridge over Roseberry Creek on Washington Rd.; bids until July 5. (See Machinery Wanted—Bridge Construction.)

Tex., Belton.—Bell County Comms. Court ordered vote July 19 upon \$9000 bonds to construct bridge and improve roads in Dennis Mill Dist.

Tex., Houston.—Harris County Comms. let contract E. B. Van de Greyn, of Houston, at about \$35,000 to construct Harrisburg road bridge.

Va., Ashland.—Hanover County will construct reinforced concrete bridge over South Anna River; County Suprs., C. S. Luck, Chrmn., Hanover, Va., receives bids until July 1; Saville & Claiborne, Conslt. Engrs., Richmond, Va. (See Machinery Wanted—Bridge Construction.)

Va., Bowling Green.—Caroline County will construct reinforced concrete bridge 93 ft. long over Pole Cat Creek and for 2900 cu. yds. approach fills; bids until June 29; G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted—Bridge Construction.)

Va., Hillsville.—Carroll County will construct steel bridge 81 ft. long over Snake Creek and for 1220 cu. yds. approach fills; bids at office of County Clerk until July 8;

G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted—Bridge Construction.)

Va., Richmond.—Southern Ry., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will rebuild bridge across south channel of James River; now asking masonry bids; will let contract for erection of bridge proper as soon as piers are ready; present structure consists of 5 through-pin spans; will install 10 through-girder spans by constructing intermediate piers.

W. Va., Middlebourne.—Tyler County will construct reinforced concrete arch bridge across Middle Island Creek; bids until July 10 at office County Clk., Middlebourne. (See Machinery Wanted—Bridge Construction.)

CANNING AND PACKING PLANTS

Ga., Augusta.—Georgia-Carolina Packing Co. Incptd. by J. P. Wood, Robt. C. Berckmans and A. G. Hackett; will establish packing plant.

CLAYWORKING PLANTS

Ga., Milledgeville.—Fire-brick.—Stevens Bros. & Co., W. C. Stevens, Prest., and W. S. Stapler, Mgr., will rebuild plant lately noted burned; has let contract to J. W. McMillan, Milledgeville, for construction of 2-story 250x130-ft. fireproof building; install machinery, cost \$10,000; daily capacity 20,000 fire-brick. (See Machinery Wanted—Concrete Reinforcement, Cement, etc.)

Tex., Houston.—Bricks.—Houston Brick Works purchased 39 acres adjoining plant; will erect addition; has 2 kilns; construct 5 or 6 additional kilns; install machinery; double present capacity.

Va., Glasgow.—Bricks and Tiles.—Chas. H. Locher of New York is reported to build \$100,000 plant for manufacturing bricks and tiles.

Va., Richmond.—Pottery.—Southern Potteries Co., Incptd.; Edward C. Bailly, Prest.; Winthrop H. Kellogg, Treas.; Sherwood E. Hall, Secy., each of New York.

COAL MINES AND COKE OVENS

Ala., Yolande.—Davis Creek Coal & Coke Co., Geo. Koffner, Supt., will develop coal land; plans daily capacity 500 tons coal; invest \$20,000 to open slope and install machinery.

Ky., Whitesburg.—Seven Vein Coal Co. is reported to develop additional coal mines.

Tenn., Chattanooga.—United States Coal Co., capital \$5000, Incptd. by S. M. Chambliss, J. A. Chambliss, K. Cowles and A. Shallday.

Tenn., Knoxville.—Brookside Co-operative Coal Co., capital \$20,000, Incptd. by L. M. DeWeese, H. O. Acuff, J. M. Deaver and others.

Tex., Como.—Fry Lignite Mining Co., capital \$20,000, Incptd. by F. E. Fry, L. F. Fry and L. E. Fry.

W. Va., Eskdale.—Don Coal Co., Huntington National Bank Bldg., Huntington, W. Va., Incptd., capital \$25,000; Frank Enslow, Jr., Prest.; G. C. Garred, V.-P.; W. H. Cunningham, Secy.; G. D. Miller, Treas.; H. T. Smarr, Mgr.; continues operation of mines with daily output 400 tons; develops 1000 acres; needs no further equipment.

W. Va., Charleston.—Coalburgh-Kanawha Mining Co., capital \$40,000, Incptd. by Harrison B. Smith, Duke W. Hill, E. C. Harrison and others.

W. Va., Williamson.—Pigeon Valley Coal Co., capital \$10,000, Incptd. by Geo. H. Weise, Jas. J. Lundy, Harry Scherr and others.

CONCRETE AND CEMENT PLANTS

S. C., Bennettsville.—Bricks.—Drake Brick & Tile Co. Incptd., capital stock \$6000, by John N. Drake, Jas. A. Drake and Geo. H. Hanna. Address John N. Drake. (See Machinery Wanted—Brick Machines, etc.)

COTTON COMPRESSES AND GINS

Ala., New Decatur.—Decatur Cotton Compress Co., Decatur, Ala., will build lately noted cotton compress; Gulf Compress Co., Memphis, Tenn., lessee; 700x400-ft. mill construction building; sprinkled; plans by J. R. Fordyce, Little Rock; machinery purchased.

Ark., Elgin.—R. D. from Newport.—J. O. Taylor will build cotton gin; has machinery. Fla., Summerfield.—Farmers' Gin & Mill Co., organized by Nathan Mayo and others; will build cotton gin; probably add corn and peanut mill. (Lately noted.)

Fla., Summerfield.—Farmers' Gin & Mill Co., organized by Nathan Mayo and others; plans to build corn and peanut mill. (See Compress and Gins.)

Ga., Milledgeville.—E. N. and O. M. Ennis will build gin; contain 80-saw gins; daily capacity, 40 bales cotton; electric power.

Ga., Summerfield.—Farmers' Gin & Mill Co. (Nathan Mayo and others) will build gin.

Miss., Greenville.—Greenville Gin & Milling Co., Incptd. by E. R. Wortham and others; will operate cotton gin. (See Flour, Feed & Meal Mills.)

S. C., Orangeburg.—Buckeye Cotton Oil Co. will not build cotton gin. (Lately incorrectly reported.)

Tex., Kennard.—Farmers' Gin Co., capital \$5000, Incptd. by W. B. Tunstall, C. A. Westerman and S. A. Curry.

Tex., San Marcos.—Smith Gin Co., capital \$8000, Incptd. by Carl Smith, G. W. Donaldson and W. W. Patterson.

COTTONSEED-OIL MILLS

S. C., Orangeburg.—Buckeye Cotton Oil Co. will not build cottonseed-oil mill. (Recent report incorrect.)

Tenn., Memphis.—Crescent Cotton Oil Co. has plans by E. B. Kenrew, Birmingham, Ala., for seedhouse and additional transmission and conveying machinery; let foundation contract to John R. Miller Co., Memphis; machinery and superstructure contracts not let; whole cost \$12,000.

Tex., Sherman.—Sherman Oil Mill increased capital from \$100,000 to \$150,000.

DRAINAGE SYSTEMS

Ky., Paducah.—John Ed Johnson, Engr., is preparing plans for drainage of Mayfield Creek; reclaim 40,000 acres; estimated cost, \$200,000.

Mo., Ulrich.—Pioneer Drainage Dist. Suprs., H. Stewart, Secy., asks bids until July 11 on drainage construction; 9 mi. main ditch; Knob Creek lateral No. 1, length 3500 ft.; No. 2, 2154 ft. long; White Oak lateral, 494 ft. long; Relief Ditch, 630 ft. long; Brooks & Jacoby, Engrs., 512 Shukert Bldg., Kansas City, Mo. (See Machinery Wanted—Drainage Construction.)

Tex., Fresno.—Fort Bend County Drainage Dist. No. 2 will make drainage improvements; plans and specifications by Clifton Rice, Richmond, Tex.; bids received by W. J. Raab, Chrmn. Drainage Comms., at Fresno, by June 17.

ELECTRIC PLANTS

Ala., Decatur.—City voted \$50,000 bonds to build electric-light plant; plans by Xavier A. Kramer, Engr., Magnolia, Miss. (Noted in May.)

Ga., Cochran.—City will have plans by Wm. M. Crook, Engr., 614 Grand Bldg., Macon, for electric light improvements. (Lately noted to vote June 16 on \$3000 bonds for improvements to light and water systems.)

Ga., Hahira.—City voted \$500 bonds to construct electric light plant. E. J. Smith, Mayor. (Noted in May.)

Ga., Macon.—City was lately incorrectly noted as voting June 16 on bonds for improvements to water and light plants.

Ky., Berry.—Board Trustees, H. W. Berry, Chrmn., will grant franchise for installation electric-light and power plant; reported that Mr. Bowman, Dry Ridge, Ky., will receive franchise. (Noted in Mich.)

Ky., Hazard.—Kentucky River Power Co., R. L. Cornell, Gen. Mgr. and Engr., let contract C. E. Carlin, Welch, W. Va., to construct power house for \$300,000 steam-driven electric generating station; 100x85 ft. steel frame building, with brick walls, concrete floors and roof. (Lately noted as having final plans; install two 1875 K. V. A. Westinghouse steam turbines and two 500 H. P. boilers with automatic stokers; 150-ton steel bunker over boiler-room; conveyor from coal tippie and over boiler-room; ele-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

vator; all machinery except conveyor has been purchased; H. W. Saunders, Welch, W. Va., in charge conveyor equipment purchase, etc.

Ky., Louisville.—Jefferson County Fiscal Court authorized expenditure of \$3000 to \$3000 to repair lighting and heating plant at county jail; Chas. C. Foster, jailer.

La., West Monroe.—City voted \$45,000 bonds to extend electric-light system, etc. Address The Mayor; noted in Apr. (See Water-works.)

Miss., Baldwin.—W. A. Stocks, Mayor, asks bids until July 12 to construct electric-light plant noted in April; includes oil engines, generators and switchboard, electric line and street-lighting system. (See Water-works. See Machinery Wanted—Electric-works and Electric-plant Construction.)

Miss., Goodman.—City, A. N. Roberts, Clk., will construct electric lighting system noted in April; bids until July 6; includes installation of oil engine, generator, switchboard, transformers, electric line and street lighting system; X. A. Kramer, Engr., Magnolia, Miss. (See Machinery Wanted—Electric Light Plant.)

Mo., Concordia.—Concordia Light & Power Co. (lately noted inceptd. with \$15,000 capital by W. S. McCall and others) contemplates establishing electric-light and power plant.

Mo., Brookfield.—City is having plans prepared by E. E. Harper, Engr., Kansas City, Mo., for electric-light plant; cost \$50,000 to \$60,000. (Lately noted.)

Mo., Breckenridge.—Hamilton Light & Power Co., Hamilton, Mo., will extend electric transmission system to Breckenridge. (Lately incorrectly noted.)

N. C., Apex.—City issued \$12,000 bonds for electric-light system construction. Address The Mayor.

N. C., Dunn.—City, J. W. Turnage, Mayor, will improve light and water plant; Gilbert C. White, Durham, N. C., Const. Engr.; \$10,000 contemplated. (See Machinery Wanted—Electric Plant Equipment.)

N. C., Kernersville.—City voted \$10,000 bonds to construct electric-light system, water-works and sewer system. Address The Mayor. (Noted in February as contemplating construction of electric-light plant.)

N. C., University.—Trustees University of North Carolina, authorized expenditure of \$42,000 for electric light system, water works and heating plant; also plan to furnish light and power to town of Chapel Hill; J. B. McCrary Co., Engr., Atlanta, Ga. (Noted in April.)

Tenn., Memphis.—Board of Commrs. have report recommending that city construct electric-light plant for which \$1,500,000 bonds were voted.

Tenn., Newton.—Newton Light & Power Co., capital \$2000, inceptd. by R. W. Clemmer, W. A. Prince, J. E. Cook and others.

Tex., Houston.—Houston, Richmond & Western Traction Co., C. C. Godman, Pres., Kansas City, Mo., is reported to build power station in connection with proposed railway between Houston and San Antonio.

Tex., Jackboro.—Jackboro Mill & Elevator Co. purchased and will install 160 H. P. engine for electric light plant; plans other improvements at mill.

Tex., Mertens.—Texas Power & Light Co. (main office, Dallas, Tex.) will construct electric transmission system from Mertens to Malone and Irene, Tex.

Tex., Wylie.—Texas Power & Light Co. (main office, Dallas, Tex.) purchased local electric-light plant and will make improvements to include construction of substation and establishing 24-hour service; construct transmission system from Murphy.

Va., Orange.—H. Oliver Lyne will build electric light plant; erecting building; also install ice plant.

Va., Richmond.—National Power Co., capital \$25,000, inceptd. by S. R. Nichols, Pres.; S. Potter, Secy.-Treas.

FERTILIZER FACTORIES

Md., Curtis Bay.—Standard Guano Co., 1500 Continental Bldg., Baltimore, is reported to build addition, increasing daily capacity from 500 to 1000 tons.

FLOUR, FEED AND MEAL MILLS

Ala., Selma.—Jimmie M. Brown will build velvet bean feed mill.

Ark., Wynne.—J. C. Mebane will build flour mill; construction commenced.

Fla., Gainesville.—Co-Operative Ice Mfg. Co. will erect building and install machinery to grind meal, grits and stock feed.

Miss., Greenville.—Greenville Gin & Milling Co., capital \$5000, inceptd. by E. R. Wortham, E. D. Davis, J. L. Strickland and others; will operate grist mill and cotton gin; later install bolting mill.

Tex., Celina.—Celina Mill & Elevator Co., B. F. Smith, V.-P. and Mgr., will rebuild plant lately noted burned; erect fireproof building; install machinery, cost \$30,000, to manufacture flour and meal.

Tex., Jackboro.—Jackboro Mill & Elevator Co. plans enlargement of mill to include installation of 160 H. P. engine (purchased) for electric light plant.

Tex., Valley Mills.—Sleeper Milling & Grain Co., capital \$15,000, inceptd. by T. M. Sleeper, J. L. Sleeper and W. M. Sleeper.

FOUNDRY AND MACHINE PLANTS

Md., Baltimore.—Enamelled Ironware.—Baltimore Enamel & Novelty Co., Clement and Woodall Sts., will build addition; brick and concrete construction; invited bids from following: Morrow Bros., Fidelity Bldg.; B. F. Bennett Building Co., 123 S. Howard St.; West Construction Co., Knickerbocker Bldg.; John Hiltz & Sons, 3 Clay St.; Fred Decker & Sons, 1213 E. Biddle St.; Cogswell-Koether Co., 406 Park Ave.; Price Construction Co., 225 St. Paul St.; Thos. B. Stanfield & Co., 212 Clay St., and Irwin & Leighton, Keyser Bldg., all of Baltimore; Geo. A. Fuller Co., Munsey Bldg., Washington, D. C.

Mo., St. Louis.—Metal Smelter.—Triangle Smelting & Refining Co., capital \$2000, incorporated by Geo. Newfeld, Fanny Newfeld and Meyer Brockman.

Okla., Devol.—Thrashing Machines.—Deep Red Valley Thrashing Machine Co., capital \$3000, inceptd. by A. L. Phillips, G. A. Smith, G. P. Hamilton and others.

THE OFFICIAL PROPOSAL ADVERTISEMENTS

Appear This Week On Pages 77, 84, 85, 86

Notices of bond sales, construction and improvement contracts to be let, equipment and supplies to be purchased, franchises offered, etc., inserted in this department bring bids from the most important bond buyers, investors, financial institutions, contractors, engineers, architects, manufacturers, and supply houses throughout the country.

Rate 20 cents per line per insertion.

The PROPOSAL department goes to press 9 A. M. Wednesday for the issue of the following day. If you cannot mail advertisement in time for any particular issue please wire copy by night letter.

Send for booklet of testimonial letters from public officials who have used the PROPOSAL department of the Manufacturers Record, for bond sales, construction work, etc.

Okla., Tulsa.—Brass Foundry.—S. Dougherty, Beaumont, Tex., plans to establish brass foundry.

Tenn., Chattanooga.—Brass Foundry.—Chattanooga Brass & Machine Co., capital \$15,000, inceptd. by W. L. Case, Carl Flatter, John W. Fort and W. F. Norman; products to include ball-bearing trolley wheels.

Tex., Aransas Pass.—Iron Fabricating Plant, Alamo Iron Works of San Antonio, Tex., purchased 3 acres on which to build fabricating plant.

Tex., Houston.—Brass Foundry.—F. C. Lane, 1117 Prairie Ave., will establish plant to manufacture brass parts, cuts and weld metal, etc.; has ordered equipment.

Va., Richmond.—Forge Shop.—Richmond Forging Corp. increased capital from \$200,000 to \$500,000.

W. Va., Wheeling.—Flexible Conduit.—Saylor Electric & Mfg. Co., 18th St., rents fireproof building and removes machinery from Pittsburgh; manufacture metallic flexible conduit; capacity 150,000 ft. per week; Frank D. Saylor, Pres.; R. G. Armstrong, Greensboro, Pa., Secy.; W. L. Saylor, V.-P. and Treas.; Harry Sharp, Mgr. (Lately noted inceptd. \$25,000 capital.)

GAS AND OIL ENTERPRISES

Fla., Kissimmee.—Kissimmee Oil Co., inceptd. by C. W. Ward, Pres.; Jno. M. Lee, V.-P.; G. F. Kribbs, Secy.-Treas.

Ga., Griffin.—Gossett Oil Co., capital \$5000, inceptd. by A. F. Gossett and others.

Kentucky.—Kentucky Land, Gas & Oil Co., capitalization \$25,000; chartered; J. D. Stone, Pres.; Albert R. Westcott, Secy.-Treas.; both of Norfolk, Va.

Ky., Louisville.—Oil Tanks.—Peaslee-Gaulbert Co. will build 5 oil tanks at 1500 High St.; cost \$3900.

La., Lake Charles.—Calcasieu River Oil Co., capital \$10,000, inceptd. by C. B. Carson, Pres.; John H. Currie, V.-P.; J. McK. Cross, Secy.-Treas.

Md., Baltimore.—Oil Distributing Station, Atlantic Refining Co. (subsidiary to Standard Oil Co., New York), Philadelphia, Pa., proposes to build large oil-distributing plant on water-front.

Md., Frederick.—Gas Pipe Lines.—Hagerstown & Frederick Ry. Co. will extend gas pipe line service.

Okla., Dundee.—City contemplates constructing natural gas plant and water-works. Address The Mayor.

Okla., Hallett.—Eagle Oil & Gas Co., capital \$20,000, inceptd. by W. J. Lauderdale and others.

Okla., Lawton.—Big Five Oil Co., capital \$15,000, inceptd. by N. A. Robertson and others.

Okla., Maud.—Nine Oil & Gas Co., capital \$80,000, inceptd. by Omer McKown and others.

Okla., Muskogee.—Springfield Oil & Gas Co., capital \$100,000, inceptd. by C. A. Lovelace and others.

Okla., Okmulgee.—Nancy Williams Oil Co., capital \$16,000, inceptd. by J. W. Hensley and others.

Okla., Oklahoma City.—Jolly Oil & Gas Co., capital \$10,000, inceptd. by Jas. Brazell and others.

Okla., Oklahoma City.—Franklin Petroleum Co., capital \$50,000, inceptd. by Jno. B. Enfield, R. H. Locke and J. E. Ireson.

Okla., Okmulgee.—Mary Rennie Oil Co., capital \$9600, inceptd. by C. T. Reno and others.

Okla., Perry.—Greasy Creek Oil & Gas Co., capital \$25,000, inceptd. by H. L. Boyes, J. D. Shepard, W. E. Johnston and F. W. Cress.

Tex., Temple.—Lee Oil & Gas Co., capital \$20,000, inceptd. by J. D. Young, W. J. Lee and A. Hudson.

Tex., Thorndale.—Worley Oil Co., capital \$1400, inceptd. by J. A. Worley, E. C. Moseley and W. W. Clark.

W. Va., Huntington.—American Oil & Gas Co., capital \$5000, inceptd. by C. F. Cunningham, Pendleton L. Williams, J. J. Rourke and others.

HYDRO-ELECTRIC PLANTS

Ala., Cordova.—Alabama Power Co., Birmingham, Jas. Mitchell, Pres., Equitable Bldg., New York, let contract Jefferson Construction Co., Birmingham, to construct foundations for steam-driven electric generating station on Mulberry Fork of Warrior River, 7 mi. from Cordova; plant to be rectangular, 163x88 ft., and 60 ft. high; brick and concrete foundation; frame of steel; contract to furnish steel let to Ingalls Iron Works Co., Birmingham; not decided whether to award general construction contract or undertake with own force; install steam turbo-generator equipment developing 35,000 H. P.; transmit electricity to augment hydro-electric plant at Lock 12 on Warrior River; this reserve steam plant to cost \$1,500,000 and be completed within 1 year. (Under Birmingham mentioned in April as announcing plan for this station and for hydro-electric unit at Lock 12; steam plant to generate 20,000 kilowatts and hydro-electric plant develop 22,000 H. P.; these plans involve investment of \$2,000,000; many other details stated in April.)

Ga., Armuchee.—A. W. Watters & Co., 1182 Broadway, New York, and Armuchee, will rebuild power plant lately burned; concrete, steel and brick construction for power house; W. A. Ford, Engr., Rome, Ga.

Va., Clifton Forge.—Virginia-Western Power Co., A. H. Grimsley, Gen. Mgr., is arranging to extend transmission lines from Alderson, W. Va., present western terminal, to Hinton, W. Va., distance of 21 mi. (Noted in May as increasing capital from \$500,000 to \$1,000,000, contemplating transmission-line extensions, etc.)

Va., Front Royal.—City, G. Gardner Waller, Mayor, voted \$19,000 bonds to improve hydro-electric plant, 1 1/4 mi. from city; install new wheels, penstock, shafting, etc.; develops 150 H. P.; E. V. Dunstan, Engr., Southern Bldg., Washington, D. C.; on completion of plans and specifications bids will be asked.

Va., Narrows.—Narrows Light & Power Co. proposes construction of hydro-electric plant at Narrows Falls, of New River; petitioned Congress for permission to construct dam.

ICE AND COLD-STORAGE PLANTS

Ala., Daphne.—R. W. Shriner will install 10-ton ice plant. (See Miscellaneous Factories. Machinery Wanted—Ice Machinery.)

Ark., Little Rock.—Terry Dairy Co., 18th and Scott Sts., will install individual ice plant; daily capacity 10 tons; cost \$7000; has let contracts.

Mo., St. Louis.—St. Louis Independent Packing Co., 3857 Chouteau St., let contract A. H. Haeseler Building & Construction Co., 621 Wainwright Bldg., St. Louis, to erect cold-storage plant; 4 stories; 165x177 ft.

Va., Abingdon.—Abingdon Creamery & Ice Co., R. W. Buhrman, Pres., will install machinery to manufacture 15 tons ice daily; lately noted. (See Miscellaneous Factories.)

Va., Orange.—H. Oliver Lyne will install ice plant in connection with electric light plant. (See Electric Plants.)

IRON AND STEEL PLANTS

Ala., Ensley.—Iron Furnace.—Tennessee Coal, Iron & Railroad Co., Birmingham, has blown in blast furnace No. 6, under repairs for past month; improvements include relining; average daily output, 400 tons.

IRRIGATION SYSTEMS

Fla., Cutler.—Chas. Deering will install irrigation plant with tank and gasoline pump; cost \$10,000; has let contract.

LAND DEVELOPMENTS

Fla., Chipola.—Florida Land Co., capital \$25,000, inceptd. by O. O. Cooper, W. L. Frederick, C. F. Hayes, R. F. Dunlap, all of Hinton, W. Va., and others; plans to develop property in Florida.

Miss., Biloxi.—Biloxi Farms Co., organized by D. J. Gay and S. L. O'Neal; develop 500 acres for 10-acre farms; plant citrus and pecan trees.

S. C., Orangeburg.—Carolina Pecan Orchard, capital \$30,000, chartered; M. O.

Dantzler, Prest.; J. P. Matheney, V.-P. and Mgr.
 Tenn., Chattanooga.—Arcadia Fruit Land Co., capital \$25,000, incptd. by J. J. Roach, J. A. Chambliss, S. R. Roddy and others.
 Tenn., Chattanooga.—Arcadia Fruit & Land Co., capital \$25,000, incptd. by S. M. Chambliss, J. J. Roach, S. R. Roddy and K. Cowles.
 W. Va., Madison.—Croft Land Co., capital \$50,000, incptd. by C. A. Croft, Siegel Workman, Harry G. Shaffer and others.

LUMBER MANUFACTURING

Ala., Aliceville.—H. F. Sly contemplates installing saw mill of 10,000 ft. daily capacity. (Lately noted under Machinery Wanted.)
 Ala., Fort Payne.—Pine States Lumber Co. incptd. to build plant.

Fla., Eastport.—Carpenter & O'Brien Co., Jacksonville and Eastport, is reported to double daily capacity of 300,000 to 400,000 ft. lumber; build additions to include twin sawmills, planing mill, central power plant, pulp and paper mills, sorting shed, storage shed, loading docks, etc.

N. C., Rocky Mount.—Tar River Lumber Co., W. L. Groom, Prest. and Mgr., has let contract for plant lately noted to be rebuilt; buildings 36x128 and 16x48 ft., cost \$3000; will install band-mill equipment, cost \$15,000; daily capacity 40,000 ft. North Carolina pine, oak and poplar.

Okla., Tulsa.—Cosby Lumber Co., capital \$15,000, incptd. by A. B. Patterson, L. L. Hutchinson and Mrs. Bessie Cosby.

S. C., Beech Island.—Beech Island Lumber Co. (temporary office, Timmonsville, S. C.) will operate single band mill, daily capacity about 40,000 ft. hardwoods; D. L. Anderson, Prest.-Mgr.; L. Anderson, V.-P.; A. J. Broom, Secy.-Treas. (Lately noted incptd., capital \$50,000.)

Va., Charlottesville.—Yancey Bark Co., capital \$75,000, incptd.; A. S. Yancey, Prest.; Price S. Yancey, Secy.-Treas.

W. Va., Dixie.—Bell Creek Lumber Co., capital \$50,000, incptd. by Hurlburt Smith, of Dixie; John Smith and John M. Nichols, of Huntington, W. Va., and others.

METAL-WORKING PLANTS

Va., Richmond.—Screens.—Richmond Strip & Screen Co. organized; A. R. Hagner, Jr., Prest.; Fred S. Valentine, Jr., Secy.; has leased building and installed machinery; manufacture fly screens and install metal weather strips. (Lately noted incptd. with \$15,000 capital.)

MINING

Ala., Clay County.—Graphite.—Greismer Graphite Co., capital \$2000, organized with W. H. McKleroy (V.-P., Anniston City Nat'l Bank), Prest.; I. J. Greismer, V.-P., and Treas.; J. F. Matthews, Secy.; each of Anniston, Ala.; will build plant; develop graphite mines in Clay County. (Lately noted incptd., etc.)

Ala., Clay County.—Graphite.—Great Southern Graphite Co., authorized capital \$100,000, organized to develop 78-acre graphite property; build 100-ton unit for refining graphite; in future add 4 units; H. O. Moore, Prest.; F. J. Hallberg, Secy.; both of Birmingham, Ala.; J. P. H. De Windt, V.-P., New York.

Ark., Mountain Home.—Will Tipton, S. J. Wayland and Earl Bibbler leased mining tract and will develop.

Fla., Dowling Park.—Phosphate.—Suwanee Phosphate Co., C. T. Holbrook and others interested, contemplates phosphate developments.

Ga., Statham.—Asbestos.—L. M. Arnold plans to develop asbestos deposits; now investigating methods of mining; may install grinding plant. (Luther Arnold, Winder, Ga., lately noted to develop asbestos.)

Mo., Granby.—Zinc, etc.—American Zinc, Lead & Smelt Co. purchased Mascot mine for \$55,000; will enlarge mill and undertake improvements.

Mo., Porto Rico, P. O. at Carterville.—Lead and Zinc.—Herman Jones and Amos Gilson will build 500-ton concentrating plant.

Okla., Lincolnville.—Lena Wall Mining Co., capital \$100,000, incptd. by Chas. Schlegel of Lincolnville; M. Kastendieck, Webb City, Mo., and J. Marion Sims of Chicago, Ill.

Okla., Miami.—St. Louis-Miami Mining Co., capital \$100,000, incptd. by W. C. Hogaboom and A. C. Wallace of Miami and H. J. Cantwell of St. Louis, Mo.

Okla., McAlester.—Minerals.—Interstate Minerals Co., capital \$200,000, incptd. by C. W. Hawley, W. Brodnax and R. W. Dick.

S. C., Sumter.—Kaolin.—Southern Clay Co., capital \$75,000, incptd.; A. C. Phelps, Prest.-Treas.; H. J. Harley, V.-P.; E. M. Hall, Asst. Treas. and Secy.; J. J. Bozeman, Asst. Secy.; purchased kaolin property at Blaney and James Crossing, where kaolin plants are located, and will continue mining developments; Maynard-Simmons Co. of Atlanta, Ga., are construction architects and engineers.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Pier.—Southern Ry., W. H. Wells, Ch. Engr. Constr., Washington, D. C., appropriated \$40,000 to rebuild Pier 4, being used by Mallory Steamship Co.; accepted plans calling for concrete floor, etc.

Fla., Jacksonville.—Dock.—Dock Committee Board of Port Comms., 407 Realty Bldg., approved plans by Engr. J. T. Land, for docks at foot of Market St.; J. C. O'Dell, Gen. Mgr., Realty Bldg., will invite bids for superstructure; plans and specifications call for building 76x392 ft.; wood covered with corrugated iron; offices and shed to be provided with electric light, steam heat, plumbing and fire-protection systems; 2 steel rolling doors in front and 9 vertical and 13 horizontal sliding doors on sides; Dougherty-Conna Construction Co., of Jacksonville, has contract for sub-structure. (Port Comms. lately noted to have let contracts totaling \$45,000, including contracts for sub-structure, creosoted piling railroad track scales, etc.)

Fla., Lemon City.—Sea Wall.—Biscayne Bay Front Realty Co., of Miami, is interested in plan to construct about 1 ml. of sea wall and fill; plan is to build sea wall about 600 ft. from present shore line and pump sand in behind it.

Fla., Sarasota.—Pier.—City will construct reinforced concrete municipal and recreation pier with suitable buildings; cost not to exceed \$15,000; bids until July 10; pier to extend 700 ft. into bay; land approach 240 ft. wide; pier 24 ft. wide for 200 ft.; next section 100x75 ft. for band pavilion and bath houses; remaining section 400 ft. long, on end of which will be platform 70x150 ft., for sun parlor, etc.; Robt. C. Bruce, Commr. of Public Works. (See Machinery Wanted—Pier Construction.)

Ga., Bainbridge.—Swimming Pool.—Bainbridge Ice Co. will not construct swimming pool. (Lately incorrectly noted.)

Ga., Monroe.—Dredging.—Karr & Moore, of Salisbury, N. C., have contract for dredging work in Alcoy River to cost \$40,000.

Ky., Hickman.—Levee.—City contemplates constructing levee. Address The Mayor.

Ky., Weeksbury.—Railway Tunnels.—Baltimore & Ohio R. Co. will build 5 tunnels, 140 to 775 ft. long, in connection with construction of Long Fork R. R.; probably soon let contract; F. L. Stuart, Ch. Engr., Baltimore, Md.

Miss., Biloxi.—Seawall.—City engaged J. D. Ferguson of Biloxi as engineer to prepare plans and specifications and estimate cost of constructing seawall or breakwater on beach.

Miss., Greenville.—Mississippi Levee Commissioners, W. L. Thompson, Ch. Engr., let following contracts aggregating \$100,000 to construct 512,000 cu. yds. levee work: Roach & Stansell of Memphis, Tenn., Ben Lomond, new levee in Issaquena county, 240,000 cu. yds.; S. R. Hughes Construction Co. of Greenville and Vicksburg, Miss., spur dike at Carter's Neck, above Greenville; Burt, Bond & McMurray, Beulah, Miss., 10 of sub-levees; John G. Sessions of Memphis, Tenn., remaining 11 sub-levees. (Call for bids lately noted.)

Mo., New Madrid.—Levee.—St. John's Levee & Drainage Dist. let contract Oglesby Construction Co. at \$280,000 to construct levee from Medley to near New Madrid.

Mo., St. Louis.—Mausoleum.—Vallhalla Mausoleum Co. let contract Chas. M. Lund, 510 Olive St., St. Louis, to erect mausoleum; cost \$150,000.

N. C., University.—Heating Plant.—Trustees University of North Carolina authorized expenditure of \$42,000 for heating plant, water works and electric light system; J. B. McCrary Co., Engr., Atlanta, Ga. (See Electric Plants.)

Tex., Fort Worth.—Levee.—Tarrant County Levee Dist., J. A. Mulholland, County Auditor, will construct levee; bids until July 3; comprises new work, filling gaps, sodding, reinforcing concrete, drain gates and cleaning channel; noted in May. (See Machinery Wanted—Levee Construction.)

Tex., Galveston.—Boat Basin.—Government will construct boat basin at U. S. Quarantine Station; bids at Washington until July 10. (See Machinery Wanted—Boat Basin.)

Tex., Wharton.—Bulkhead.—Anahuac Canal Co., Thos. E. Ellis, Mgr., is reported to construct bulkhead across Turtle Bay.

MISCELLANEOUS ENTERPRISES

Fla., Sarasota.—Amusement Pier and Golf Grounds.—City Council will soon invite bids on construction of amusement pier and golf grounds; R. C. Bance, Commr. of Public Works, prepared general outline of proposed structure, providing for extension of 700 ft. into bay, with L of 300 ft.; include bandstand, pavilion and swimming pool; cost of pier not to exceed \$20,000, and improvement of 100 acres planned for public park and golf course, \$25,000; bids to be subject to confirmation by vote on bond issue.

Ga., Tifton.—Plumbing.—Morgan, Johnston & Morgan, capital \$5000, incptd. by I. D. Morgan, E. M. Johnston and I. D. Morgan, Jr.

La., West Monroe.—Fire Apparatus.—City voted \$45,000 bonds to install additional apparatus for fire protection. Address The Mayor. (See Water-works.)

Md., Baltimore.—Grain Elevator.—Pennsylvania R. Co. will replace Canton Elevator No. 3, recently burned; has plans and specifications, having previously decided to demolish No. 3 and build on site; all concrete construction; fireproof; cost probably \$400,000; Geo. R. Sinnickson, Supt., Union Station, Baltimore; A. C. Shand, Ch. Engr., Broad St. Station, Philadelphia. (Lately noted to rebuild No. 3 grain elevator.)

Mo., St. Louis.—Publishing.—Wm. Harvey Miner Book Co., capital \$20,000, incptd. by Sears Lehmann, John S. Lehmann, Frank H. Nottbusch and others.

N. C., Asheville.—Paving Contracting.—Asheville Paving Co., capital \$10,000, incptd. by J. R. Oates, J. K. Cowan and F. J. Fanning.

N. C., Charlotte.—Construction.—E. H. Clement Construction Co., 712-714 Commercial Bank Bldg., incptd. with \$25,000 capital by E. H. Clement, W. A. Thomason and A. R. Schofield.

Okla., Aline.—Grain Elevator.—Sheppard Elevator Co., capital \$25,000, incptd. by J. M. Sheppard, O. F. Sheppard and J. R. T. Russell.

Okla., Tulsa.—Cleaning.—Beehive Cleaning Co., capital \$4000, incptd. by M. Himmelstein, Geo. Cordish and E. A. Robinson.

S. C., Chester.—Hardware.—Valley Hardware Co., chartered by C. B. Gadsden and W. E. Sanders; capital \$5000.

S. C., Woodruff.—Publishing.—Woodruff Publishing Co., chartered by W. H. Gray, E. A. Bryson, J. S. Rogers and others; capital \$35,000.

Tex., Iredell.—Grain Elevator.—Iredell Elevator Co. (lately noted organized) let contract to Interlocking Cement & Silo Co., Waco, Tex., to erect steel and concrete 40x60 ft. \$5000 building; J. F. Wieser, Hico, Tex., Prest.; J. C. Phillips, V.-P.; H. B. Strong, Secy.-Treas.

Tex., Paris.—Hardware.—Warner-Allen Hardware Co., capital \$8675, incptd. by H. A. Warner, T. R. Allen and V. W. Haygood.

Tex., San Antonio.—Publishing.—Express Publishing Co. will erect additions and remodel building at Navarro and Crockett Sts.; bids until July 2; separate bids on plumbing, heating and elevators; bids to be opened at office of Alfred Gilles Co., "F" Bldg.; plans and specifications on file with Alfred Gilles Co. and August A. Herff Co., Asso. Archts.

Va., Charlottesville.—Hardware.—Reynolds-Zink Hardware Co., capital \$20,000, incptd.; J. M. Reynolds, Prest.; T. J. Willis, Secy.

Va., Richmond.—Lithographing.—A. Hoen Co. will erect lithographing plant; 1 story; contain 6000 sq. ft.; reported cost \$100,000.

MISCELLANEOUS FACTORIES

Ala., Daphne.—Ice-Cream, Butter, etc.—R. W. Shriner will establish plant to manufacture ice, ice-cream and dairy products; erect 2-story 30x50-ft. concrete-block building costing \$3000. (See Machinery Wanted—Creamery Equipment, etc.)

Ark., Ozark.—Lighting Tree Killer Mfg. Co., capital \$5000, incptd. by Z. S. Thompson, J. F. Eason and J. R. Crocker.

Fla., Bartow.—Filler for Asphalt.—Stone Products Co. (lately noted incptd., capital \$10,000), John T. Burrows, 53 Main St., Prest.-Mgr., let contract to W. T. Ellis, Bartow, to erect 40x126-ft. building; purchased equipment, including dryer, crusher and pulverizer; daily capacity 170 tons mineral filler for asphalt pavement. (See Machinery Wanted—Sacking Machinery, etc.)

Fla., Okeechobee.—Smoking Pipes.—O. K. Pipe Co. organized to establish lately noted plant; W. P. Leitner, Prest.; J. T. Waters, V.-P.; Miss E. M. Waters, Secy.-Treas.; J. T. Hamilton, Mgr.; will erect \$2000 one-story wooden building; manufacture smoking pipes; daily capacity 1000.

Fla., Tampa.—Shipbuilding.—Tampa Steam Ways Co., W. J. Warder, Gen. Mgr., proposes to build addition providing facilities for construction wooden vessels.

Ga., Atlanta.—Chestrobe.—Southern Chestrobe Co., capital \$100,000, incptd. by J. F. Burkhardt, H. M. Daniel and W. M. Keheley; will manufacture wardrobe device to attach to bedsteads.

Ga., Atlanta.—Bottling.—Coco-Cola Co. let contract Arthur Tufts of Atlanta to erect 2-story factory at Peachtree and Ellis Sts.

Ga., Brunswick.—Shipbuilding.—Brunswick Marine Construction Corp. organized; main office, Brunswick; executive office, 63 Wall St., New York; Willard U. Taylor, Prest., New York; R. Lawrence Smith, V.-P.; G. W. Hunkley, Secy.; Wm. Scott, Treas.; W. H. Rutland, Gen. Mgr.; L. J. Nilson, Supt.; each of Brunswick; has mill construction buildings costing \$25,000; install band saws, planers and other woodworking machinery costing \$15,000; has purchased; plant equipment for building 10 vessels at once. (Lately incompletely noted.)

Ga., Savannah.—Lime.—W. B. Schuman, Jr., may install plant for daily capacity 100 tons lime and 100 tons hydrated lime. (See Machinery Wanted—Lime Equipment.)

Ky., Lexington.—Signals and Electric Devices.—Lexington Signal Co., capital \$20,000, incptd. by A. E. Gaugh, Jerry Cawby, E. A. Baxter and John Gund.

Ky., Louisville.—Remedy.—Dakota Jack-Whitemoon Remedy Co., capital \$25,000, incptd. by J. J. and Bertha L. Pursley and Frank B. and Elizabeth Cottner.

La., Bogalusa.—Paper and Pulp.—Great Southern Lumber Co. will build \$800,000 addition to its plant, manufacturing paper from pine waste; W. H. Sullivan, Gen. Mgr., wires Manufacturers Record; Pulp and paper mill; will have capacity 60 tons pulp and 100 tons container liner; buildings of brick and creosoted wood; cost approximately \$200,000 for building and \$600,000 for machinery.

La., Lockport.—Castnet.—Automatic Castnet Co., capital \$25,000, organized to introduce castnet device for Gulf of Mexico fishing industry; H. F. Dorsey, Secy., Lockport; J. C. Mabry, Prest., New Orleans.

La., New Orleans.—Dyes.—Robt. Saunders, 7355 Burthe St., is reported planning to build dye factory.

Md., Baltimore.—Chemicals.—Mutual Chemical Co. of America, 55 John St., New York, purchased property adjoining branch plant at Block and Point Sts.; it is reported to build large addition; advises Manufacturers Record: Have nothing to report as regards our purchase in Baltimore.

Md., Baltimore.—Tires.—McGraw Tire Co., 10 W. Oliver St., will build plant at 33-35 W. Mount Royal Ave.; 4 stories; brick and terra-cotta facade; plate-glass windows; plans by Theo. Wells Pletsch, American Bldg.

Md., Baltimore.—Paint.—H. B. Davis Co., 407 Keyser Bldg., will have plans prepared by J. E. Moxley, Jr., 531 N. Calhoun St., Baltimore, for 4 additional units to plant at Keyser and Bayard Sts.; tank structure 28x50 ft.; oilhouse and furnace, 22x48 ft.; two buildings, each 24x48 ft., for reducing-house and gum building, respectively; brick and reinforced concrete construction.

Md., Baltimore.—Clothing.—Schloss Brothers & Co., Baltimore and Paca Sts., contemplate securing site in Baltimore, Harford or Anne Arundel counties and building clothing-manufacturing plant with industrial city; in this plant would consolidate its several factories now operating; nothing definite determined; Frank Sanderson, Secy.

Md., Cumberland.—Automobile Tires.—Kelly-Springfield Tire Co., Akron, O., may build plant to manufacture automobile tires; reported to have submitted proposition contemplating \$3,000,000 investment conditional upon \$750,000 subscription to stock; Cumberland Chamber of Commerce planning to meet conditions and submitted offer; Kelly-Springfield corporation will meet June 21 to consider proposition.

Mo., St. Louis.—Chemicals.—John T. Milliken & Co., 3d and Clark Sts., let contract Kellermann Construction Co., Roe Bldg., St. Louis, to erect plant; 4 stories; fireproof; sprinkler system; plans by Wm. Wedemeyer of St. Louis. (Noted in Mech.)

Mo., St. Louis.—Prest-O-Lite Co., Chaning Ave. and Olive St., will erect serv-

ice station and office; frontage 134 ft.; office with tile floor and plate glass windows; plans by J. M. Hirschstein; I. Segel, Contr.

Mo., St. Louis—Bakery.—Wm. Saussele, 3900 Shenandoah Ave., let contract John Elbert, Oregon Ave., to erect building to contain bakery, 2 stores, garage, etc.; walls of bakery faced with enameled brick; walls and ceiling of store lined with vitrolite; Jacob Heim, Archt., St. Louis. (Noted in May.)

N. C., Durham—Bakery.—R. H. Wright, lately noted to build bakery, states will erect 40x70-ft. 1-story building for a bakery; has made all arrangements for building and material.

Okla., Shawnee.—W. P. Wood let contract Nathan Cowen of Shawnee to erect 1-story factory.

Tenn., Chattanooga—Gasoline Product.—W. B. Torando, 309 Sharp Ave., Churchville (P. O., Chattanooga), will organize company to manufacture motor fuel.

Tenn., Jellico—Flavoring Extracts, etc.—Davis Mfg. Co., G. C. Davis, Pres.-Mgr., will erect 30x100-ft. 2-story brick addition; double capacity; J. P. Case, Contr.; company manufactures flavoring extracts and grocers' sundries.

Tenn., Knoxville—Distillery.—Jack Ray Distilling Co., capital \$2000, inceptd. by J. G. Ray, J. W. Proffitt, T. A. Whitte and others.

Tenn., Knoxville—Household Specialties.—Superior Mfg. Co., 749 Atlantic Ave., organized; J. P. Henry, Pres.; C. T. Bittle, V.-P.; S. H. Douglas, Secy.-Treas.; E. P. Douglas, Mgr.; will erect building and install mixing machinery; manufacture household specialties. (Lately noted inceptd., capital \$10,000.)

Tex., Dallas—Remedies.—S. H. Hog Remedy Co., capital \$10,000, inceptd. by John K. Sweet, Robert E. Hodgman and Werten D. Jones.

Tex., Dallas—Thermowax.—Thermowax Co. (lately noted inceptd., capital \$25,000), organized to continue finishing cement floors with Thermowax process; A. T. Powell, Pres. and Treas.; A. J. Annan, V.-P. and Gen. Mgr.; J. H. Cox, Secy.

Tex., Fort Worth—Electric Batteries.—Fort Worth Battery Co., capital \$3000, incorporated by R. E. Cole, A. F. Hawkins and M. E. Wortham.

Tex., Henrietta—Glass.—Howard Glass Mfg. Co., capital \$40,000, inceptd. by H. H. Howard, O. A. Henderson and W. H. Howard.

Tex., Houston—Rice.—Texas State Rice Milling Co., capital \$10,000, inceptd. by Ralph B. Feagin, Raymond Neilson and C. H. Wilson.

Tex., Orange—Shipbuilding.—Fred Swails leased land on east side Sabine River and will build shipbuilding ways.

Tex., Orange—Wood Preservatives, etc.—H. D. Fletcher, of Beaumont, Tex., will install plant to manufacture wood preservative, pine oil and other products.

Va., Abingdon—Creamery.—Abingdon Creamery Co. (lately noted inceptd., capital \$50,000) organized; R. W. Buhman, Pres.; W. H. Giesler, V.-P.; E. W. Potts, Secy.; W. M. Richie, Treas.; will erect building; install ice-cream and butter machinery, also equipment for daily capacity 15 tons ice; R. M. Hughes, Waynesboro, Va., now receiving machinery bids. (In Apr. noted to erect \$25,000 building.)

Va., Alexandria—Glass.—Old Dominion Glass Co. purchased Alexandria Glass Co.'s plant and will remodel.

Va., Edinburg—Bottling.—King Cola Bottling Co., capital \$500, inceptd.; E. M. Clem, Pres.; Lantz Mills, Va.; F. Lee Emswiler, Secy.; John C. Hutchison, Treas.-Mgr.; will erect 20x50-ft. building and install bottling machinery to cost \$1500.

Va., Quantico—Shipbuilding.—International Steel & Shipbuilding Co., authorized capital \$2,500,000, chartered to succeed International Plate Co., recently chartered; directors include G. A. Garrett, V.-P. of Du Pont National Bank; Hugh McIsaac, V.-P. of Publicity Corp., 61 Home Life Bldg., both of Washington, D. C.; C. L. Ford, Mgr. of Southern Boiler and Tank Works, Memphis, Tenn.; Thos. J. Shea, Portland, Ore.; Jas. J. Shirley of T. A. Gillespie Co., New York; let contract to Kaucher, Hodges & Co., Memphis, Tenn., for construction 3 large buildings for plant; \$90,000 to \$120,000 estimated cost these buildings, one to be 280x75 ft. Contractors wire Manufacturers Record: "At present not ready to give out any details on Quantico contract; give full information as soon as all concerned are ready to have particulars published." International Co. is reported to have contracts for

6 large vessels. Address correspondence to Bestor Walter, Real Estate Trust Bldg., Washington, D. C. (International Steel Plate Co. lately noted to build shipyards.)

Va., Richmond—Beverages.—Old Dominion Beverage Corp., capital \$250,000, chartered; M. S. Gary, Pres.; J. H. Oliver, Secy.-Treas.

Va., Suffolk—Candy.—Planters' Nut & Chocolate Co., A. Obici, Pres., let contract A. Stallings & Son to build candy factory; 50x100 ft., with additional cooking and roasting room 30x30 ft., of concrete; whole to be 4 stories; factory of brick and mortar; mill construction; fireproof; hollow-metal windows; metal doors; fire walls; plans by C. W. Nelms. (Noted in Feb.)

W. Va., Roncoveerte—Mail Cranes.—Livesay Safety Crane Co. organized by E. G. Livesay to manufacture mail crane; office, 613 Terry Bldg.

MOTORS AND GARAGES

Ga., Atlanta—Garage.—Georgia Ry. & Power Co. will erect garage and service station; 1 story; 84x250 ft.; fireproof.

Ga., Augusta—Garage.—W. H. Harrison, H. H. Cummings, E. J. Erbsdilling and City of Augusta, let contracts to erect garage 34x160 ft., etc. (See Building News—Contracts Awarded, Stores.)

Md., Baltimore—Garage.—Cityco Realty Co., 2 E. Lexington St., will have plans prepared by Fred E. Beall, 306 St. Paul St., Baltimore, for commercial garage on Monroe St. between Lorman and Laurens Sts.; 1 story; brick; 45x250 ft.; capacity 75 cars.

Mo., Hannibal—Garage.—Thos. L. Anderson, 217 S. Maple Ave., let contract Hannibal Construction Co., 507 Hannibal Trust Co. Bldg., to erect garage; 2 stories; 75x85 ft.; cost \$12,000.

Mo., Kansas City—Garage.—Westport Laundry Co. will erect 2-story garage; cost \$6000.

Mo., St. Louis—Garage.—H. L. Schmure let contract Farish & Gray, Third National Bank Bldg., to erect garage.

Mo., St. Louis—Motor Trucks.—Merchants' Truck Co., capital \$5000, inceptd. by John A. Yung and others.

Mo., St. Louis—Automobile Service Station. Weisels-Gerhart Real Estate Co. will build automobile service station; glass front; tile floors; driveway entrance; I. Segel, Contr.; J. M. Hirschstein, Archt.; both of St. Louis.

N. C., Charlotte—Automobiles.—Foreman-Howard Motor Co., capital \$100,000, inceptd. by W. R. Foreman, L. J. Howard and J. D. Stratford.

N. C., Winston-Salem—Garage.—Leak-Cobb Co. let contract to Travers Wood Co., Richmond, Va., to erect \$10,000 fireproof garage. (Noted in May.)

Okla., Tulsa—Garage.—H. C. Stahl and M. A. Younkman, 1217 S. Baltimore St., let contract Emmett Binson, Tulsa, to erect garage; 1 story; 100x140 ft.; cost \$16,000.

Okla., Tulsa—Garage.—H. C. Stahl will erect garage; 1 story; brick, concrete and steel; cost \$12,000.

S. C., Florence—Automobiles.—Overland-Florence Co., capital \$10,000, inceptd. by M. M. Brown and W. B. Rollins.

S. C., Greenville—Automobiles.—Highland Automobile Co., capital \$10,000, inceptd. by O. P. Mills and A. L. Mills.

Tenn., Memphis—Automobiles.—Standard Automobile Co., capital \$5000, inceptd. by M. B. Norman, E. A. Ute, P. K. Norman and others.

Va., Fredericksburg—Garage.—B. J. Marshall let contract Walter Snellings to erect garage; 40x100 ft.; brick; concrete floors; office, machine shop, storage-room and garage; W. B. Jenkins, Mgr.

Va., Norfolk—Automobiles.—Ford Motor Co., Detroit, Mich., will build large assembling and export plant for automobiles; negotiating for site on railway and deep water; wires Manufacturers Record: No plans or details completed for Norfolk.

Va., Richmond—Garage.—Roanoke Central Garage, capital \$15,000, inceptd.; M. M. Milton, Pres.; S. H. Holland, Secy.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Okla., Henryetta—Missouri, Oklahoma & Gulf Ry., J. W. Dawson, Ch. Engr., Muskogee, Okla., is reported to build shops costing \$80,000.

Okla., Tulsa.—St. Louis & San Francisco Railroad, V. K. Hendricks, Engr., St. Louis, Mo., will expend \$200,000 for improvements to include 20-stall roundhouse, mechanical

plant, trackage and several mi. of switches; entire plant, including roundhouse equipment, to be operated by electricity. (Lately noted.)

ROAD AND STREET WORK

Ala., Dothan.—Houston county will construct 20 mi. of road from near Dothan to Lucy; bids until July 10; W. R. Koonce, County Engr.; A. C. Crawford, Chrmn. Board of Revenue. (See Machinery Wanted—Road Construction.)

Ala., Gadsden.—Etowah County Highway Com. will construct Piedmont Rd.; county labor and material.

Ala., Gadsden.—Etowah County Road Com. will construct Piedmont road from Hokes Bluff to Calhoun county line; distance 9 mi.

Ark., Hot Springs.—Street Improvement Dist. No. 11 will pave Valley St. from Reserve to Malvern Ave., Reserve Ave. from Valley St. to Central Ave., and Spring St. from Valley St. to Central Ave.; wood blocks or bitulithic; Dist. Comms., E. S. Blasdel, Chrmn., receive bids until June 24. (See Machinery Wanted—Paving.)

Ark., Newport.—City will construct concrete highway on Beech St. Address The Mayor.

Ark., Stuttgart.—Street Improvement Dist. No. 3, J. L. Hagler, Secy., will construct 47,900 sq. yds. pavement; concrete, bituminous or macadam pavement; bids until June 26; Towl Engineering Co., Engr., Pettit Bldg., Stuttgart; noted in May to issue \$37,500 bonds. (See Machinery Wanted—Paving.)

Ark., Texarkana.—City will construct concrete sidewalks on Broad, Pine, Vine and other streets. Address The Mayor.

D. C., Washington.—District of Columbia Club, C. Hart Merriam, Chrmn. of Committee, and American Automobile Association plan to construct road through Chopawamsic Swamp; \$4870 fund.

Fla., Avon Park.—City, R. W. Swearingen, Mayor, will delay construction about 60 days on account legal technicality; will again vote on \$30,000 bond issue. (Lately noted voting \$30,000 bonds to pave 3 mi. streets.)

Fla., Bradentown.—Manatee County Commissioners, Robt. H. Roesch, Clerk, let contract Continental Public Works Co., New York, at \$208,088.05 to construct roads in Sarasota-Venice Road Dist.; asphaltum surface; concrete and sand base; curbs and gutters; also to Luton Bridge Co., York, Pa., at \$29,850 to construct reinforced concrete bridges; Chas. A. Browne, Dist. Engr., Sarasota, Fla. (Call for bids noted in April.)

Fla., Jacksonville.—Duval County Comms., Frank Jones, County Road Supvr., will rebuild highway to St. Augustine; 10 mi.; convict labor.

Fla., Miami.—Dade County voted \$40,000 bonds to construct oiled roads; S. A. Belcher, Chrmn. County Comms. (Noted in May.)

Fla., Miami.—City rejected bids to construct 54,000 sq. yds. asphalt pavement in business district and will readvertise for bids to be opened July 10; W. B. Moore, City Clerk. (Call for bids lately noted.)

Fla., Perry.—Taylor County Comms. ordered vote July 25 on \$600,000 bonds to construct roads; plans to build 24 mi. of brick and 65 mi. of asphaltic concrete road; all bridges and culverts have been built of steel and concrete.

Fla., Sanford.—Seminole County Comms. let following contracts to construct roads: Southern Clay Mfg. Co., Orlando-Sanford Rd.; Wilson Construction Co., Jacksonville, Sanford and Oviedo Rd. and road from Wilson's Corner to Wekiwa River; Augusta Vitrified Brick Co., Sanford-Geneva Rd.; Hand Bros. of Sanford, clay road from Oviedo to Chuluota; C. F. Harrison, fill St. Johns River to be hard-surfaced with shell; brick roads to be 8 ft. wide, cement-grouted Dunn lug brick with concrete curbing; construction under supervision of G. R. Ramsey, Engr.

Ga., Gainesville.—City will pave W. Broad St. with concrete; thin coating of tar on top. Address The Mayor.

Ga., Savannah.—Chatham County Comms. will construct 1 mi. of concrete road on Skidaway Rd. between Dale and La Roche Ave.; cost \$6000; Harvey Granger, Chrmn. Committee on Roads and Bridges, will invite bids for material; Oliver T. Bacon, Chrmn. County Comms.

Ky., Brooksville.—Bracken County voted \$200,000 bonds to construct roads. Address County Comms. (Noted in April.)

Ky., Cadiz.—Trigg County voted \$150,000

bonds to construct roads. Address County Comms. (Noted in Apr. to vote on bonds.)

Ky., Covington.—Kenton County will construct concrete road 18 ft. wide, 6 in. thick at sides and 8 in. thick in center; 52,100 sq. yds. shaping, 7600 cu. yds. concrete, 1440 cu. yds. local stone for shoulders; Fiscal Court, John B. Dillon, County Clerk, receives bids until June 22; noted in May to issue \$150,000 bonds. (See Machinery Wanted—Road Construction.)

Ky., Danville.—City will construct 7000 sq. yds. asphalt paving on Main St.; bids until July 4; alternate proposals for bituminous concrete; include curbs, guttering, storm-water sewers, catch-basins, etc.; S. F. Crellius, Engr.; J. M. Wallace, Mayor. (See Machinery Wanted—Paving.)

Ky., Dayton.—City will reconstruct with combined concrete curb and gutter on various streets; bids opened June 19; Chas. A. Riggs, Engr., 1113 Traction Bldg., Cincinnati, O.

Ky., Flemingsburg.—Fleming County let contract Phelps-Post-Guyn Co. of Lexington to reconstruct Flemingsburg and Elizaville turnpike, and Flemingsburg and Mt. Sterling turnpike; cost \$10,000. (Noted in May to vote on \$150,000 bonds.)

Ky., La Grange.—Oldham County Comms. let contract Alex. Stoepler to construct 4.7 mi. macadam resurfacing on La Grange to Shelbyville intercounty road; Comms. also let contract for 2 mi. water-bound macadam paving on Buckner-Crestwood road. (Lately noted.)

Ky., Louisville.—Jefferson County Fiscal Court let contract Louisville Asphalt Co. at \$13,911 to reconstruct section of Preston St. road with asphalt.

Ky., Mount Sterling.—City, C. K. Oldham, Mayor, asks bids for July 5 on about 800 sq. yds. asphalt, vitrified block on concrete foundation, bitulithic or tarvia paving, with concrete curb and gutter; lately noted. (See Machinery Wanted—Paving.)

Ky., Whiteburg.—City will rebuild Main St.; vote on bonds. Address The Mayor.

Ky., Williamsburg.—Whitley County Roads Commission will construct 15 to 18 mi. limestone, water-bound macadam road; bids June 26; H. F. Davis, County Road Engr. (See Machinery Wanted—Road Construction.)

La., Mansfield.—De Soto Parish, L. M. Cook, Pres., Police Jury, opened bids at New Orleans June 12 to construct 65 mi. road; 6-in. washed gravel; width 14 ft.; \$250,000 available; contract not yet let; W. L. Gilmer, Engr. (Noted in May.)

Md., Baltimore.—City will grade and pave with cement-concrete additional alleys; bids until June 28; R. M. Cooksey, Highways Engr. (See Machinery Wanted—Paving.)

Md., Baltimore.—City let contract Nichols Bros., 214 Courtland St., at \$6733 to pave private alley with cement concrete; R. M. Cooksey, City Engr.

Md., Frederick.—Frederick County will construct 1.01 mi. State-aid highway upon or along Burkittsville-Knoxville Rd., and 1.52 mi. upon or along Monrovia-Hyattstown Rd.; County Comms., H. L. Gaver, Clerk, receive bids until July 8. (See Machinery Wanted—Road Construction.)

Md., Frederick.—Frederick County Commissioners let contract Bester & Long Co., of Hagerstown, Md., to construct Keymar-Taneytown Rd.; macadam.

Md., Midland.—City will grade and pave 1600 ft. street; bids until June 22; Thos. H. Taylor, City Clerk; lately noted to issue \$5000 bonds to grade and pave streets and alleys and construct sewers. (See Machinery Wanted—Paving.)

Md., Rockville.—Montgomery County Commissioners, John R. Lewis, Pres., ask bids until July 11 to construct about 5 mi. Munsters Mill Rd., between Norbeck and near Redland. (See Machinery Wanted—Road Construction.)

Md., Towson.—Baltimore County Comms. let contract P. Flanigan & Sons, Harford Rd. and B. & O. R. R., to improve Reisterstown Rd. from Hayward Ave. to Seven Mile La.

Md., Upper Marlboro.—Prince George County Comms. let contract Austin Bennett Construction Co., Knickerbocker Bldg., Baltimore, Md., to construct section State-aid highway on Sargent Rd. from Riggs Rd. to District of Columbia line, 1.12 mi.; cost about \$13,000. (Call for bids noted in May.)

Miss., Clarksdale.—City let contract W. R. Ellis of Clarksdale to construct 55,000 sq. yds. 3-in. concrete slab paving.

Miss., Clarksdale.—Coahoma County Supervisors, S. F. Carr, Clerk, will issue \$36,000 inter-county road bonds.

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Miss. Corinth.—Alcorn County, Corinth to the Gulf Dist., W. C. Sweat, Atty., will build 15 mi. gravel road; let contract July 6. (See Machinery Wanted—Road Construction.)

Miss. Greenwood.—City let contract to Memphis Asphalt & Paving Co., Memphis, Tenn., at \$16,517 for asphaltic concrete paving on Washington St. (Lately incorrectly noted as \$1517 contract.)

Miss. Greenwood.—City's paving contract, lately noted let to Memphis Asphalt & Paving Co., 811 Falls Bldg., Memphis, Tenn., is for asphaltic concrete on concrete foundation; 12,000 sq. yds. pavement, 5400 lin. ft. curb and gutter, including sewers, catch-basins and manholes.

Miss. Gulfport.—Harrison County Supvrs. let contract Warren Bros. Co. of Boston, Mass., to construct 2 mi. road in each of cities of Biloxi, Gulfport and Pass Christian; Warrentie paving; shell in intervening spaces; Supvrs. will issue \$300,000 additional bonds to complete beach road and build north and south road from Gulfport to Stone county line.

Miss. Louisville.—Winston County, B. M. McCully, Chancery Clerk, asks bids until July 3 for road improvements in 3 districts; Xavier A. Kramer, Consult. Engr., Magnolia, Miss. (See Machinery Wanted—Road Construction.)

Miss. Louisville.—Winston County Commissioners let contract F. D. Harvey & Co. of Memphis, Tenn., to construct roads in Beat 1.

Miss. Moss Point.—City votes July 4 on \$8000 bonds to repair 4 mi. of shelled and elled streets and make other street repairs. C. H. Wood, Mayor.

Miss. Okolona.—Chickasaw County, Supervisors' Dist. No. 1, voted \$33,000 bonds for road construction noted in May; Supvrs. Dist. No. 4 will issue \$7000 bonds for roads; W. A. Wilkinson, Clerk, Houston, Miss.

Miss. Senatobia.—Tate County Supvrs., J. A. Wooten, Clk., plan to issue (at July 3 meeting) \$200,000 bonds to grade and macadamize 52 mi. roads as follows: 19 mi. east and west of Coldwater, 10 mi. east and west of Senatobia, 12 mi. through county north and south of Panola Rd.

Mo., Independence.—Jackson County Commissioners let contract Michael Ross at \$73,862 to grade and macadamize Woods Chapel Rd., 5 mi.

Mo., Joplin.—City let contract V. E. Koch at \$6157.76 to construct pavement on McConnell Ave. from Central Ave. to 7th St.; at \$4885.23, 6th St. from St. Louis to Patterson Ave., and at \$368.65, Forest Ave. from 4th to 7th St. J. J. McAfee, City Engr.

Mo., Joplin.—City Com. authorized paving of West 7th St. from Joplin St. to alley west of May St. with vertical fiber brick, to cost \$24,237.50; Winfield Ave. from 4th St. to 4th St. addition, with Class F macadam, at cost of \$2344.29; St. Louis Ave. from Central Ave. in Y. M. C. A. addition, to 4th St., in East Highland addition, with Class F macadam; ordered J. J. McAfee, City Engr., to prepare estimates on cost of following: Concrete curb and gutter on section of Gray Ave.; curb and gutter on section of Jackson Ave. and 18th St., and concrete pavement in alley between Joplin and Wall St., from 14th to 20th St.

Mo., Sedalia.—City let contract Lee Carpenter, North Grand Ave., Sedalia, to construct 5500 sq. yds. concrete paving and 4600 lin. ft. concrete curb.

Mo., St. Charles.—St. Charles County Commissioners let contract Ralph Dierker at \$790 to construct 890 ft. macadam road on Marias Croche Rd., and at \$600 to build 800 ft. rock road near Black Walnut; also to Missouri Bridge & Iron Co., St. Louis, at \$3319 to construct steel bridge on Salt River Rd. over McCoy's Creek; Alfred Riske, County Highway Engr. (Call for bids lately noted.)

N. C., Albemarle.—City will have plans prepared by J. D. Spinks, City Engr., for street paving; M. J. Harris, Mayor.

N. C., Concord.—City let contract Hudson Paving Co. to construct 4000 yds. cement sidewalks.

N. C., Dobson.—Surry County, Stewart Creek Township, J. H. East, Secy., will grade and top about 25 mi. road; sand clay top about 20 ft. wide.; \$25,000 available; construction by Highway Com.; C. S. Currier, Engr., Elkin, N. C.

N. C., Dunn.—City, J. W. Turnage, Mayor, let contract to F. J. McGuire, Norfolk, Va., to construct 40,000 sq. yds. sheet asphalt paving at \$1.39 per lin. yd.; \$55,000 available; Gilbert C. White, Engr., Durham, N. C. (Bids lately noted.)

N. C., Roanoke Rapids.—City will grade and lay granolithic sidewalks; 10,000 yds.; bids until June 28; J. W. Taylor, Mayor; J. T. Chase, Consult. Engr. (See Machinery Wanted—Paving.)

N. C., Scotland Neck.—City contemplates bond issue to pave streets, etc. Address The Mayor. (See Water-works.)

N. C., Washington.—Beaufort County Commissioners, W. E. Swindell, Chrmn., will construct 1½ to 2 mi. concrete road; receive bids July 3. (See Machinery Wanted—Road Construction.)

Okla., Norman.—City let contract Struble & Mitchell, Pauls Valley, Okla., to construct concrete pavement; will soon invite bids for additional paving.

Okla., Sand Springs.—City will construct street paving to cost about \$60,000; plans and specifications being prepared by Benham Engineering Co. of Oklahoma City; contract to be let.

Tenn., Madisonville.—Monroe County Pike Commrs. L. A. Hunt, Secy., let contract (subject to sale of bonds) to Wilkerson & Marcum, Lenoir City, Tenn., for macadam and chert surfacing of 90 mi. of road and 75 mi. of grading; total bond issue \$325,000, of which \$150,000 has been sold and \$175,000 will be sold as work progresses. (Call for bids lately noted.)

Tex., Athens.—Henderson County Rd. Dist. No. 1 let contract to Cobb & Gregory, Houston, Tex., to construct 40 mi. sand-clay rd.; A. B. Axtell, Engr., Athens. (Bids lately noted.)

Tex., Athens.—Henderson County Rd. Dist. No. 3 will construct roads; expend \$50,000; bids July 2; A. B. Axtell, Engr., Athens; noted in May. (See Machinery Wanted—Road Construction.)

Tex., Belton.—Bell County Commrs. Court ordered vote July 19 upon \$6000 bonds to improve roads and construct bridges in Denils Mill Dist.

Tex., Brenham.—Washington County, Precinct No. 3, voted against \$300,000 bond issue for roads. (Lately noted.)

Tex., Center.—City will improve 5 mi. of streets; includes grading, etc., construction of culverts, bridges, cuts and fills; bids invited; 1 mi. of street and public square to include gravel; W. I. Powell, City Secy. (See Machinery Wanted—Paving.)

Tex., Corsicana.—Navarro County, Dawson Good Roads Dist., voted \$100,000 bonds to improve roads. Address County Commrs.

Tex., Corsicana.—Navarro County, Frost Dist., voted \$180,000 bonds to construct roads. Address County Commrs.

Tex., Hillsboro.—City paving contract, lately noted let to Southern Paving Co., Dallas, Tex., comprises asphaltic concrete construction costing \$50,000. (See Machinery Wanted—Wagons, Asphalt.)

Tex., Houston.—Harris County Commrs. let contract Finley Method Co. at \$13,900 to surface 5½ mi. Clark-St. Rd.

Tex., Liberty.—Liberty County Commrs. let contract to Bexar Construction Co., San Antonio, Tex., to construct sand-clay roads; \$60,000 available; C. N. Smith, County Judge, Liberty. (Lately noted issuing warrants.)

Tex., Mt. Vernon.—Franklin County, Road Dist. No. 1, voted \$75,000 bonds to construct roads. Address County Commrs. (Noted in May.)

Tex., Quitman.—Wood County Commrs. will issue \$50,000 bonds to construct roads.

Tex., Sinton.—San Patricio County, Sodville Dist., votes July 8 on \$10,000 bonds to construct roads. Address County Commrs.

Tex., Sinton.—San Patricio County, Road Dist. No. 5 (including Odem and vicinity), votes July 8 on \$50,000 bonds to construct roads. Address County Commrs.

Tex., Schulenburg.—City is having specifications prepared by Mr. Washington, Engr., for paving of square; will ask bids.

Tex., Sulphur Springs.—Hopkins County Commrs. Court decided on about 40 mi. road recommended by Engineer Witt for improvement; bids to be asked. Surveys were mentioned in April and \$400,000 bonds available were noted voted by Road Dist. No. 1, Hopkins County, Dec., 1915.

Tex., Taylor.—City votes July 3 on \$50,000 bonds to pave streets; W. E. Dozier, City Mgr. (Noted in May to pave 34 blocks.)

Va., Charlottesville.—Albemarle Horse Show Association purchased 20-acre site and will expend \$20,000 to construct ½-mi. oval racing track, concrete grandstand, horse-show ring and racing barns.

Va., Covington.—Alleghany County, Covington Dist., voted \$100,000 bonds to improve roads between Covington, Chalybeate, Hot

Springs, White Sulphur Springs and other cities.

Va., Danville.—City defeated bonds to improve streets. R. Brydon, Clerk. (Noted in March.)

Va., Fairfax County.—Government will construct experimental gravel road from Hunting Creek Bridge to Gum Spring, 4¼ mi.; Chief Clerk United States Dept. of Agriculture, Washington, D. C., receives bids until June 30; specifications and proposal forms obtainable from office of Public Roads and Rural Engineering, 515 14th St., Washington. (See Machinery Wanted—Road Construction.)

Va., Gate City.—Scott County will macadamize 9 mi. of road between Speers Ferry and Gate City and 5.3 mi. between Moccasin Gap and Yuma Postoffice; road already graded; also to grade about 5 mi. between Yuma Postoffice and Kermit; bids until July 1; G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted—Road Construction.)

Va., Leesburg.—Loudoun County Commrs. let contract Colvin & Gipsen of Culpeper, Va., to construct macadam road in Broad Run Dist. from Ashburn to pike.

Va., Richmond.—City let contract John J. Curley, Richmond, at \$358.85 for granolithic sidewalk paving on Fairmont Ave., Broad St., Grove Ave., Beverly St. and Church Hill; also at \$326 to gravel Richmond and Manchester Turnpike, 8-in. deep and 18 ft. wide, from Maury St. to city limits.

Va., Rustburg.—Campbell County, Brookville Dist., opened bids to construct 20 mi. bituminous and water-bound macadam road; Dist. Road Board will let contract later; \$200,000 available; S. L. von Gemmingen, Division Engr., Lynchburg, Va. (Bids for road construction noted in May.)

Va., Salem.—Roanoke County, Cave Spring Dist., contemplates voting on \$150,000 bonds to construct roads. Address County Commrs.

Va., Staunton.—City will resurface with asphalt binder Churchville Ave. and portion of N. Augustin St.; bids opened June 23. Address Gen. Mgr. (See Machinery Wanted—Paving.)

W. Va., Elkins.—Randolph County, Leadsville Dist., Thaddeus Pitt, Clerk, County Court, will construct 19 mi. roads and streets; bids until July 1; noted in May. (See Machinery Wanted—Road Construction.)

W. Va., Fayetteville.—Fayette County, Sewell Mountain Dist., voted \$175,000 bonds for road construction; Latelle Graney, Prest. County Court, Long Branch, W. Va. (Noted in Apr.)

W. Va., Fayetteville.—Fayette County Kanawha Dist., voted \$350,000 bonds for road construction; Latelle Graney, Prest. County Court, Long Branch, W. Va. (Noted in Apr.)

W. Va., Summersville.—Nicholas County defeated bonds for road construction. (Noted in May.)

W. Va., Wayne.—Wayne County defeated bonds for road construction. (Noted in May to vote June 6 on \$900,000 bonds to build 40 mi. road.)

SEWER CONSTRUCTION

Ark., Malvern.—City will organize Improvement Dist. Nos. 12 and 13 to construct sewer system and water-works. Address The Mayor.

Fla., Maitl.—City let contract J. P. Little, of West Palm Beach, Fla., at \$29,163 to construct section 2 of Storm Sewer Dist. Nos. 1 and 2; 644 ft. 12, 15, 18, 22 and 24-in. vitrified pipe and 2442 ft. concrete sewer, etc.; W. B. Moore, City Clerk. (Call for bids lately noted.)

Fla., Tampa.—City instructed R. D. Martin, City Engr., to invite bids for completion of Cleveland St. storm sewer; cost \$11,000.

Ga., Cochran.—City voted \$15,000 bonds to construct sewer system. Address The Mayor. (Lately noted.)

Ga., Cochran.—City will have plans by Wm. M. Crook, Engr., 614 Grand Bldg., Macon, Ga., for construction sewer system. (City lately noted to vote June 16 on \$12,000 bonds for sewers.)

Ga., Macon.—City was lately incorrectly noted as voting June 16 on bonds for sewer construction.

Ky., Hickman.—City plans to engage engineer to prepare plans for sewer and drainage system. Address The Mayor.

Ky., Marion.—City will construct sewer and septic tank. Address The Mayor.

Miss., Batesville.—City will vote on \$5000

bonds to construct sewer system in business section. Address The Mayor.

Miss., Batesville.—City voted \$5500 bonds to construct sewer system. Address The Mayor.

Mo., King City.—City, G. L. Sherman, Mayor, advises is installing district sewer only (no water-works); Mr. Sells, Eng., Kansas City. (Lately otherwise noted.)

N. C., Charlotte.—City has report by Gilbert C. White, Consult. Engr., Durham and Charlotte, N. C., for outfall sewer and sewage-disposal plant. (Lately noted.)

N. C., Kornersville.—City voted \$10,000 bonds to construct sewer system, water-works and electric-light plant. Address The Mayor.

N. C., Scotland Neck.—City contemplates bond issue to construct sewer system, etc. Address The Mayor. (See Water-works.)

Okla., Afton.—City let contract Municipal Excavator Co. of Oklahoma City, Okla., at \$12,758.20 to construct main sewer, and at \$11,600 to construct lateral sewers; total, \$23,758.20; Benham Engineering Co., Engr., Oklahoma City. (Call for bids lately noted.)

Okla., Sand Springs.—City retained Benham Engineering Co., Oklahoma City, to prepare plans, specifications, etc., and supervise construction of storm and sanitary sewer system; cost about \$50,000.

Okla., Tulsa.—City will construct sanitary sub-main sewer on 15th St.; length, 366 ft.; bids opened June 19; H. H. Wyss, City Engr. (See Machinery Wanted—Sewer Construction.)

Tex., Austin.—City will install underground sewer along Waller St.; cost \$6750.

Tex., Ennis.—City let contract to Fort Worth company to build sewage-disposal plant; cost \$15,000. Address The Mayor.

Tex., Houston.—City let contract Texas Construction Co., Houston, at \$21,563 to construct storm sewer in Welch Ave. from Albany to Converse St.

W. Va., Charleston.—City will construct sewer in Watt St. from Charleston to Patterson St., and Patterson St. from Watts St. to Anacoda Ave.; B. A. Wise, City Mgr.; receives bids until June 30. (See Machinery Wanted—Sewer Construction.)

TELEPHONE SYSTEMS

Fla., Daytona.—East Florida Telephone Co. has plans for improvements to telephone system to include additional cables.

Ky., Glasgow.—Glasgow Telephone Co., capital \$100,000, organized by Basil Richardson, W. L. Porter and R. H. Porter; plans to acquire properties of Gainsboro and Home telephone companies.

TEXTILE MILLS

N. C., Durham.—Hosliery.—W. B. Clements, V.-P. of Merchants' Bank, and C. A. Adams will build mill to knit cotton hosliery.

N. C., Charlotte.—Cotton Yarn.—Johnston Mfg. Co. will build 12,000-spindle addition; 3-story; 128x78 ft.; fireproof construction mill building; S. Oates, Contr.; R. C. Biberstein, Archt.; both of Charlotte. (Supercedes May item noting 5000-spindle addition.)

N. C., Newton.—Hosliery.—Fidelity Hosliery Mills Co. will add 50 new knitting machines; has purchased; increase daily capacity from 600 to 800 doz. prs.

N. C., Reidsville.—Hosliery.—Reidsville Knitting Mills organized by A. V. Victorius & Co., and Bernard Bandler & Sons, New York; will build 105x44 ft. mill structure; install 50 knitting machines with accompanying equipment; electric power; electricity from Reidsville transmission system of Southern Power Co., Charlotte, N. C.

N. C., Salisbury.—Bleaching and Mercerizing.—Yadkin Bleaching Co. organized; D. P. Campbell, Prest., New York; T. C. Love, 1st V.-P., Gastonia, N. C.; M. L. Jackson, 2d V.-P.; N. B. McCaless, Secy.-Treas.; both of Salisbury; build \$200,000 plant to bleach and mercerize textiles.

Okla., Oklahoma City.—Cotton Twine.—State Board of Affairs will install \$34,465 equipment (in State Penitentiary) to manufacture cotton twine; ordered this machinery; daily capacity 12,000 lbs. (Previously noted.)

S. C., Greenville.—Textile Products.—Southern Textile Co., capital \$25,000, chartered; B. M. Graves, Prest.; Claude Ramsey, V.-P. and Treas.; K. L. Jones, Secy.

S. C., North-Cotton Yarn.—E. C. Johnson may establish mill to spin cotton yarn. (See Machinery Wanted—Cotton Machinery.)

Tenn., Chattanooga.—Knit Underwear.—Signal Knitting Co. organized; W. A. Jones,

Prest.-Treas.; Floyd Murphy, V.-P. and Secy.; will construct reinforced concrete building; let contract to A. F. Hahn; W. H. Sears, Archt.; both of Chattanooga; install machinery to knit underwear. (Lately noted incpd. with \$150,000 capital.)

Va., Roanoke.—Artificial Silk.—Viscose Co., A. C. Ernst, Gen. Mgr., and J. C. Clayton, Ch. Engr., Marcus Hook, Pa., will build mill to manufacture artificial silk; wires Manufacturers Record: Concrete and brick fireproof construction; main shed 500x120 ft.; weekly capacity 40,000 lbs. silk. Ballinger & Perrot, Archts. Engrs., 17th and Arch Sts., Philadelphia, have plans and specifications; invited bids; advise Manufacturers Record: Five-story 153x77-ft. building with columns, floors and roof of reinforced concrete (flat slab construction), rolled steel windows and freight elevator; 1-story 536x140-ft. building (brick walls and shed construction) with roof of saw-tooth skylights, and cast-iron columns and steel trusses with plank roof covered by composition roofing; 3-story 166x58-ft. building of reinforced concrete, flat slab construction similar to 5-story structure; 2-story and basement 154x143-ft. and 103x73-ft. structures (2) with brick walls and generally of reinforced concrete construction, with composition roofing; 108x70-ft. power-house with brick walls and overhead coal bunkers; 191-ft. radial brick chimney, 11½ ft. inside diam.; 1,077,000-gal. concrete reservoir; contractors invited to bid (by June 21) are: Barbour & Sons and E. N. Nerrenden, both of Roanoke; John P. Pettyjohn and C. W. Hancock & Sons, Lynchburg, Va.; Irwin & Leighton, 12th and Cherry Sts., Philadelphia; William Provost, Jr., Chester, Pa. (A. C. Ernst lately reported to build \$1,000,000 silk m.f.h., etc.)

WATER-WORKS

Ark., Malvern.—City will organize Improvement Dist. Nos. 12 and 13 to construct water-works and sewer system. Address The Mayor.

Ga., Macon.—City was lately incorrectly noted as voting June 16 on bonds for water works improvements.

Ga., Waycross.—City let contract Park Morrand Co. of Waycross to construct concrete reservoir.

Ky., Bloomington.—City voted \$62,000 bonds to improve water-works. Address The Mayor.

La., West Monroe.—City voted \$45,000 bonds to retire present indebtedness, install water tank, electric pump and filtering plant, extend water mains and electric-light system and install additional apparatus for fire protection. Address The Mayor. (Noted in Apr.)

Miss., Baldwin.—City, W. A. Stocks, Mayor, asks bids until July 12 to construct water-works pumping station and electric-light plant noted in April; includes pumping and power-house, reservoir, etc.; Xavier A. Kramer, Consult. Engr., Magnolia, Miss. (See Electric Plants. See Machinery Wanted—Water-works and Electric-plant Construction.)

Miss., Cleveland.—City, L. M. Guyner, Official, will extend water-works; cost \$6000; install 4200 ft. 4-in. mains, 15 fire plugs. (See Machinery Wanted—Water-works Materials.)

Mo., Chaffee.—City plans to construct water-works. Address The Mayor.

Mo., King City.—City, G. L. Sherman, Mayor, advises will not install water system. (Lately incorrectly noted.)

Mo., La Moille.—City voted \$20,000 bonds to construct water-works. Address The Mayor.

N. C., Dunn.—City, J. W. Turnage, Mayor, will improve water and light plant; Gilbert C. White, Consult. Engr., Durham, N. C.

N. C., Kernersville.—City voted \$10,000 bonds to construct water-works, sewer system and electric-light plant. Address The Mayor.

N. C., Scotland Neck.—City contemplates bond issue to construct water-works and sewer system and pave streets. Address The Mayor.

N. C., University.—Trustees, University of North Carolina, authorized expenditure of \$42,000 for water-works, electric-light system and heating plant; J. B. McCrary Co., Engr., Atlanta, Ga. (See Electric Plants.)

Okla., Bessie.—City voted \$25,000 bonds for water-works. Address The Mayor.

Okla., Dundee.—City contemplates constructing water-works and natural-gas plant. Address The Mayor.

Okla., Enfield.—City, W. C. Metcalfe, Mayor, voted \$25,000 bonds for lately noted water-works extensions and improvements.

S. C., Newberry.—City let contract to Hughes Specialty Well Drilling Co., 96 Ashley Ave., Charleston, S. C., to drill well (or wells) 10 in. x 8 in. x 500 ft.

Tenn., Bristol.—City has received report from Knight & Quayle, Engrs., Chattanooga, Tenn., containing statement as to available sources for water supply for Bristol, Tenn., and Bristol, Va. (Noted in April.)

Tex., Allee.—City Com. will drill additional deep well and build 150,000-gal. tank of reinforced concrete construction; has let contract.

Tex., Kingsville.—City votes June 24 on \$150,000 bonds, of which \$20,000 will be expended for purchase of water plant owned by private company and \$130,000 for water-distributing system. Address The Mayor. (Noted in Apr.)

Tex., Lyford.—A. D. Struthers and others have received franchise to construct and operate water-works system.

Tex., Van Alstyne.—City plans to build pumping station and improve water-works. Address The Mayor.

WOODWORKING PLANTS

Ala., Decatur.—Staves.—Holland Blow Stave Co., J. N. Gibson, Secy.-Treas., has let all building and materials contracts for dry-kilns lately noted to be rebuilt.

Ala., Montgomery.—Staves, etc.—J. C. Turville & Sons of Martin, Tenn., plans to build factory for staves, etc.; purchased 8-acre site; expend \$30,000 for machinery.

Ark., Rush.—Staves.—A. M. Frazier, representing Pekin Stave Co., purchased white oak timberland; will build large stave mill.

Fla., Tampa.—Cigar Boxes.—Weldman-Fisher Co., capital \$100,000, incpd.; Geo. F. Weldman, Prest.; Thos. D. Fisher, V.-P.; Jno. A. B. Anderson, Secy.

Ga., Macon.—Veneer.—Grigorl Benenson of London, Eng. (represented by Herring & Spaulding of Macon), purchased sash, door and blind department of Massee-Felton Lumber Co., and will remodel to manufacture veneer.

Tenn., Knoxville.—Staves.—A. R. Humble Stave & Lumber Co. (lately noted incpd. with \$50,000 capital by A. R. and H. H. Humble and others) succeeds A. R. Humble & Sons; proposes to establish plant in Knoxville; now operates 5 plants in Scott County, 1 at Somerset, and contemplates establishing another additional mill in Campbell County.

Va., Flint Hill.—Cooperage.—Flint Hill Cooperage & Lumber Co., capital \$25,000, incpd.; E. Marshall Newton, Prest., Hume, Va.; C. P. Amory, Secy.-Treas., Flint Hill.

FIRE DAMAGE

Ala., Clanton.—Charles Reynold's residence; loss \$2500.

Ala., Selma.—W. D. McCurdy's cotton gin; loss \$15,000.

Ark., Argenta.—Reinman & Wolfert's stable, 1215 E. Washington Ave.; J. M. Branch's business block; Clyde Drug Store, owned by Mrs. Duke Harston; loss \$20,000.

Ark., Hot Springs.—Tom McConnell's residence in Oaklawn addition.

Ark., Hot Springs.—E. W. Rector's residence.

Ark., Newport.—Hotel Hazel, owned by Wolff-Goldman Realty Co.; loss \$15,000.

Fla., Thonotossa.—Lee & Edwards' packing plant; loss \$2000.

Fla., Tampa.—John Ferlita's residence; loss \$4000.

Ga., Columbus.—Ladies' Haberdashery, owned by T. T. Miller; City Drug Store; Sarling Shoe Store and Kirven Dry Goods Co.; loss \$75,000.

Ga., Greenville.—J. Render Terrell's residence.

Ga., Thomasville.—Thomasville Spoke & Handle Works.

Ky., Dexter.—W. A. Threath's residence.

Ky., Louisville.—Preston Hotel, owned by W. G. Davis and operated by Preston Hotel Co., B. McDevitt, Prest.; loss \$10,000.

Ky., Hardin.—Carlis Cope's residence.

Ky., Paducah.—Terrell Distilling Co.'s warehouse and packing room.

Md., Baltimore.—Jones Hollowware Co.'s plant, Ashland Ave. and Ensor St.

Md., Hagerstown.—Benjamin Berkson's warehouse; loss \$6000.

Md., Woodlawn.—C. Franklin Emmart's residence; loss \$4000.

Miss., Columbus.—Mrs. W. D. Prowell's residence; loss \$5000 to \$6000.

N. C., Charlotte.—Geo. F. Dunn's residence. N. C., Fuquay Springs.—Fuquay Hardware Co.'s warehouse; Thompson-Howard Bldg., owned by E. A. Howard and A. W. Thompson; loss \$15,000.

N. C., Goldsboro.—Wm. H. Best's buggy and wagon works; Don Scott's livery stables; total loss \$20,000.

N. C., Snow Hill.—Hotel Potter; loss \$10,000.

Okla., Ringling.—Frank Wildman's building; Ringling Saddlery Co.'s building; Colson Rooming House; Ed. Dowd's rooming house and restaurant, building owned by D. A. Cochran; loss \$8000.

Okla., Marietta.—W. C. Peden's residence. S. C., Cheraw.—Cheraw Wholesale Grocery Co.'s store; owned by M. B. Smith.

S. C., Lancaster.—T. Y. Williams' cotton gin; loss \$5000.

Tenn., Dyersburg.—Wilson Drug Co.'s store, owned by Dr. R. A. Burke; loss \$4500.

Tenn., Monterey.—St. Raphael's Institute; loss \$10,000.

Tex., Blanket.—Baptist Church and parsonage; loss \$5000; Rev. J. T. Hamilton, Pastor.

Tex., El Campo.—J. R. Praytor's pumping plant; loss \$1000.

Tex., Haskell.—Western Cotton Oil & Gin Co.'s plant; loss \$75,000.

Tex., Houston.—Houston Car Wheel & Machine Co.'s pattern shop and brass foundry at Spring and White Sts.; loss \$20,000.

Tex., Houston.—Houston Car Wheel & Machine Co.'s pattern shop and brass foundry; loss \$33,000.

Tex., Port Arthur.—The Texas Co.'s paint and carpenter shop; loss \$20,000.

Tex., Sherman.—Tom Spurlock's residence; loss \$4000.

Tex., Tehuacana.—G. W. Evans' store.

Tex., Van Alstyne.—Louis Garver's warehouse; loss \$2500.

Va., Roanoke.—J. B. Fishburn's garage at 735 13th St. S. W.; loss \$4000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Birmingham.—J. Mercer Barnett has plans by Joy & Gallup, Birmingham, for apartment-house; 2 stories; 12 suites; 116x90 ft.; steam heat; tile roof; cost \$25,000.

D. C., Washington.—Ernest G. Walker has plans by M. G. Lepley, 1406 G St. N. W., Washington, for 3-story brick apartment building; cost \$30,000.

Ga., Atlanta.—J. J. Logue will erect 2-story brick veneer apartment-house at 167 Ashby St.; cost \$10,000; also expend \$1000 to repair building; day labor.

Ga., Augusta.—Mrs. L. E. Pollard has plans by G. Lloyd Preacher, Augusta, for 2 apartment-houses.

Ky., Lexington.—Mrs. Morris L. Levy has plans by J. V. Moore, Lexington, for apartment-house; brick; stone foundation; 12 rooms; cost \$4000.

Ky., Lexington.—W. S. Willett has plans by Manley & Young, Lexington, for apartment-house; 3 stories; brick and stone; 20 rooms; cost \$5000.

Ky., Louisville.—Mrs. S. H. Owens will erect brick apartment; cost \$5000.

Mo., Kansas City.—Home Investment Co. will erect 3 apartment houses; 6 suites each; cost \$51,000.

Mo., Kansas City.—Jorgensen & Brink will erect 2 apartment-houses; 6 suites; cost \$20,000.

Mo., Kansas City.—Hoffman Bros. will erect 21-apartment building; cost \$25,000.

Mo., Kansas City.—L. H. Kenton, of Kenton Bros., will erect two 6-room apartment-houses.

Mo., Kansas City.—Corbin Building Co. will erect apartment-house; 6 suites; cost \$9000.

Mo., Kansas City.—J. P. Herrington, 1919 E. 33d St., has plans by Albert B. Fuller, 523 Reliance Bldg., Kansas City, for apartment-house; 12 suites of 5 rooms; vitrified brick; cut-stone trim; 93x80 ft.; prepared roofing; wood-joint floors; Dunham heating system; cost \$42,000.

Mo., St. Louis.—Clara Investment Co. will erect store and apartment building. (See Stores.)

Mo., St. Louis.—Trade Realty & Building Co. will erect 6-family apartment-house in Dameron sub-division; later erect several similar structures; total cost buildings and sites \$175,000.

Mo., St. Louis.—Delmar Investment Co. will erect 6-family apartment-house on Clemens Ave.; each suite with 4 rooms, sun parlor, sleeping porch and separate garage.

Mo., St. Louis.—R. A. and G. B. Bullock acquired site at Plymouth and Hamilton Aves., 262x145 ft., and will erect number of single and double 3- and 4-room flats.

Okla., Tulsa.—M. J. Glass will erect apartment building; 3 stories; brick; cost \$15,000.

Tex., Beaumont.—Mrs. E. Nulle will erect apartment-house; 3 stories; brick and frame; 14 suites; store on lower floor.

Tex., El Paso.—Geo. Beaudette and W. F. Cropper will erect \$22,000 apartment building, Texas and Alameda Sts.; 190x160 ft.;

2 stories; 12 apartments of 3 rooms and bath; completion in 90 days.

Tex., El Paso.—Julius A. and Robert Krauer will erect store and apartment building. (See Stores.)

ASSOCIATION AND FRATERNAL

Fla., Orlando.—Knights of Pythias, Ind. Order Odd Fellows and Woodmen of the World, are reported to erect brick buildings for stores and lodge rooms.

Ky., Ghent.—Carroll Lodge, No. 45, I. O. O. F., R. Scott Williams, Secy., Building Com., receives bids until June 27 to erect 2-story brick building to contain 2 store-rooms, lodgeroom and anteroom.

La., New Orleans.—Jerusalem Temple, Nobles of the Mystic Shrine, is having plans prepared by Emil Weil and Sam Stone, New Orleans, for temple; Moorish type; cost \$150,000; Charles Wainberger, Illustrious Potentate.

Miss., Meridian.—Grand Lodge of Eastern Star will erect chapel at Masonic Home; B. F. Jamieson, Grand Patron.

BANK AND OFFICE

D. C., Washington.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, is having plans prepared by Milburn, Heister & Co., 710 14th St. N. W., Washington, for office building to replace burned structure; tapestry-brick exterior; let contract to McClintic-Marshall Co., Pittsburgh, for 500 tons steel.

Fla., Miami.—Wayne Realty & Investment Co. will remodel building for stores and offices. (See Stores.)

Fla., Miami.—W. B. Ogden will erect theater and office building. (See Theaters.)

Mo., Kansas City.—Metropolitan Building Co. will erect 2-story store and office building; cost \$33,500.

Okla., Tulsa.—Sinclair Oil & Refining Corp., H. F. Sinclair, Prest., will erect office building; reported investment \$500,000; A. E. Watts, representative, wires Manufacturers Record: "Structure of reinforced concrete; 10 stories and basement; 74x140 ft.; white terra-cotta facing; architect not selected; full details not decided."

Tex., Dallas.—O'Connor Estate (L. A. Pires and E. O. Tenison, representatives) will erect bank building to be occupied by Dallas Trust & Savings Bank, Edward Gray, Prest.; 3 stories and basement; fireproof; cost including equipment \$100,000. (Lately noted.)

Va., Bedford City.—People's Bank will erect bank, store and office building; 2 stories; 12 offices and banking quarters; steam heat.

CHURCHES

Ark., Batesville.—Episcopal Church will erect building at Main and 2d Sts.; cost \$18,000. Address The Rector.

Ark., Rector.—Methodist Church has plans by E. E. Porterfield, Piggott, Ark., for building; 50x84 ft.; brick; metal-tile roof; wood floors; hot-air heat; cost \$10,000; bids opened June 26; construction begins about July 15. Address Frank P. Jernigan. (Lately noted.)

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Ark., Texarkana.—First Methodist Church will erect Sunday-school building; Rev. Philip Cone Fletcher, pastor.

Fla., Lakeland.—First Presbyterian Church will erect \$20,000 building. Address The Pastor.

La., Oak Grove.—Methodist Episcopal Church South, Rev. W. T. Woodward, pastor, has plans by John Gaisford, Memphis, Tenn., for church and Sunday-school building; classic style; slate or tile roof; bowled floor; heating not decided; city electric lights; concrete walks; cost \$10,000 to \$12,000; bids opened Sept. 1; construction begins Sept. 15. Address The Pastor. (Lately noted damaged by fire.)

Miss., Batesville.—Baptist Church will erect building; cost \$800. Address The Pastor.

N. C., Albemarle.—First Baptist Church will erect \$30,000 building; brick and stone. Address The Pastor.

N. C., Washington.—Baptist Church will erect building Main and Harvey Sts.; pressed brick; cost \$20,000. Address The Pastor.

N. C., Winston-Salem.—Greenwood Avenue Baptist Church, Rev. J. T. Byrum, Pastor, will erect parsonage; also plans to enlarge church.

N. C., Winston-Salem.—Greenwood Baptist Church will erect parsonage; also plans to erect addition to church building. Address The Pastor.

Okla., Tulsa.—Second Baptist Church, Rev. Chas. E. Brewer, pastor, will erect \$15,000 building.

S. C., Filbert.—Filbert Presbyterian Church will erect building; J. A. Carroll, W. L. Pursley, M. R. Dickson, elders.

S. C., York.—Presbyterian Church will erect Sunday-school; 3 stories and basement; auditorium; 25 class rooms; cost about \$22,000. Address The Pastor.

Tenn., Memphis.—Decatur Street Christian Church will erect addition to building; cost \$15,000; Dr. Albert R. Adams, Chrmn., Bldg. Com.

Tenn., Nashville.—Woodland Street Christian Church, Rev. J. E. Stewart, pastor, is having plans prepared by Russell E. Hart, Nashville, for building; brick; terra-cotta trim; cost about \$15,000; will soon invite bids; completion by Jan. 1.

Tenn., Springfield.—D. M. Crawford, Memphis, has not contract to erect building for Methodist Episcopal Church South. (Late report incorrect.)

Tex., Dallas.—Central Christian Church will repair burned structure; cost \$300. Address The Pastor.

Tex., Fort Worth.—Beth El Congregation will erect \$40,000 temple. Address The Rabbi.

Va., Richmond.—Asbury Methodist Church plans to enlarge or erect new building; A. S. Bartlett, John R. Smith, J. D. Perdue and others, Building Com.

W. Va., Charleston.—Board of Directors of Union Mission, Clendenin and Lovell Sts., will erect building; A. E. Humphreys is interested; plans in progress.

W. Va., Warwood.—St. John's Catholic Church is having plans prepared by Meador & Sweeney, Huntington, W. Va., for building; definite details not determined. (Previously noted to erect \$12,500 stone building.)

W. Va., Wheeling.—St. Paul's Evangelical Church is having plans prepared by Fred Faris, Wheeling, for \$50,000 building.

CITY AND COUNTY

Ark., Little Rock.—Fire Station.—City, Chas. E. Taylor, Mayor, has plans by Thos. Harding, Little Rock, for fire station; bungalow style; tile roof; concrete, wood and tile floors; city lighting; cost \$800; hot-water heat, \$600; concrete sidewalks, \$500; construction begins July 1. Address Fletcher Chenault, Secy. Board of Public Affairs. (Lately noted.)

Ark., Swifton.—Jail.—City will erect jail. Address The Mayor.

Fla., Hogan.—Stockade.—Duval County Comms., Jacksonville, Frank Brown, Clerk, will erect convict stockade at county farm. (See Machinery Wanted—Building Materials; Lumber.)

Fla., Jacksonville.—Warehouse.—J. C. O'Dell, Gen. Mgr. of Comms., 405 Realty Bldg., receives bids until July 19 to erect warehouse and general offices on Municipal Pier as follows: (a) Warehouse and offices; (b) lighting; (c) steam heating apparatus; (d) plumbing and fixtures; (e) fire protection system; plans, specifications, etc., from Mr. O'Dell.

Ga., Quitman.—Library.—Carnegie Library Com. is having plans prepared by H. W. Witcover, Savannah, for library; cost \$10,000. (Previously noted.)

Ga., Valdosta.—Jail.—City will erect jail. Address Mayor Converse.

La., New Orleans.—Fire Station.—Dept. Public Finance, Accounting Division, receives bids until June 27 to erect 2-story brick stucco engine-house at Bony and Delaronde Sts.; plans, specifications and blank forms at office City Engr.; A. G. Ricks, Commr. (Previously noted.)

Miss., Gulfport.—Library.—Library Comm. has plans by Nolan & Torre, New Orleans, for Carnegie library. (Lately noted.)

Miss., Gulfport.—Library.—City, Geo. M. Foote, Mayor, is having plans prepared by Nolan & Torre, New Orleans, for Carnegie library; 43x57 ft.; cost \$10,000. Address Architects. (Lately noted.)

Miss., Tylertown.—Jail.—J. C. Luter, Clerk Board Supervisors, receives bids until July 20 to erect jail, etc. (See Courthouses.)

Miss., West Point.—Auditorium.—City defeated \$15,000 bonds to erect auditorium. (Previously noted.)

Mo., Kansas City.—Library.—Directors, Kansas City School Dist. receive bids until July 6 for materials and erection of addition and alterations to Public Library at 9th & Locust Sts.; plans and specifications at office Chas. A. Smith, Archt., 602 Finance Bldg., Kansas City. (Previously noted.)

Okla., Mangum.—Fair.—City votes July 1 on \$10,000 bonds to purchase and equip site for Greer County fair. Address Mayor Borden.

Tenn., Morristown.—City Hall.—City will erect city hall and auditorium; 3 stories; seating capacity 1500. Address The Mayor.

Tex., Centerville.—Jail.—Leon County plans to erect courthouse and jail. (See Courthouses.)

Tex., Kaufman.—Almshouse.—Commissioners' Court is receiving bids to erect 3 buildings of 4 rooms and bath at county farm.

Tex., San Antonio.—City votes July 17 on \$1,000,000 bonds for expenses of Bi-Centennial and Pan-American Exposition. Address The Mayor. (Lately noted to vote June 29.)

W. Va., Glenville.—Jail, etc.—Gillmer County indefinitely deferred erecting jail, sheriff's residence and courthouse. (See Courthouse.)

COURTHOUSES

Ala., Andalusia.—Covington County Commissioners will erect \$100,000 courthouse.

Ala., Athens.—Limestone County Comms., George Malone, Judge of Probate, will consider plans and specifications July 3 for courthouse.

Ga., Cleveland.—White County votes Aug. 5 on \$30,000 bonds to erect courthouse. Address Board of County Comms.

Miss., Tylertown.—J. C. Luter, Clerk Board of Supervisors Walthall County, receives bids until July 20 to erect brick courthouse, jail and for equipment; also at same time separate bids for heating, plumbing, electric wiring and fixtures, jail cells and courthouse furnishings; plans and specifications at office Chancery Clerk, Tylertown, and Xaver A. Kramer, Archt. and Engr., Magnolia, Miss. (Previously noted.)

Tex., Centerville.—Leon County plans to erect courthouse and jail; cost \$60,000. Address County Clerk.

W. Va., Glenville.—Gillmer County Commissioners deferred indefinitely erecting \$60,000 courthouse, jail and sheriff's residence; Holmboe & Lafferty, Archts., Clarksburg, W. Va. (Lately noted.)

DWELLINGS

Ala., Birmingham.—Birmingham Realty Co. has plans by Wm. Leslie Welton, Birmingham, for residence in Norwood; cost \$10,000.

Ala., Ensley.—Dr. H. A. Harris has plans by Wm. Leslie Welton, Birmingham, for \$5000 residence.

Ala., Ensley.—John Angwin has plans by Wm. Leslie Welton, Birmingham, for \$5000 residence.

Ala., Fort Payne.—Mrs. N. H. Snodgrass will erect farm residence; colonial style; cost \$12,000.

Ala., Montgomery.—Peter Nicrossi will erect 2-story frame residence on Fleder St.; cost \$4500.

Ala., Montgomery.—R. F. Hardeman will erect three 1-story frame residences; cost \$5700.

D. C., Washington.—John L. Knopp, 29th and Jackson Sts. N. E., has plans by W. S.

Plager, 2115 Kearney St. N. E., Washington, for 2 dwellings lately noted at 20th and Kearney Sts.; 24x36 ft.; hollow tile and stucco; slate roof; oak and pine flooring; hot-water heat; gas and electric lights; cost \$5000; construction by owner has begun. Address architect. (See Machinery Wanted—Building Materials.)

D. C., Washington.—B. H. Gruver has plans by Geo. T. Santmyers, 216 Kenos Bldg., Washington, for three 2-story brick residences; cost \$7500.

D. C., Washington.—H. A. Kite has plans by A. E. Landvoigt, 713 14th St., N. W., Washington, for three 2-story brick residences; cost \$5000.

D. C., Washington.—H. R. Howenstein, 1314 F St., N. W., will erect eleven 2-story brick dwellings, 1347-63 and 1367 A St., N. E.; cost \$28,000.

D. C., Washington.—Shannon & Luchs have plans by W. R. Talbott, 1314 F St., N. W., Washington, for seven 2-story brick residences, 4402-4412 15th St., and 1501 Webster St.; cost \$23,000.

D. C., Washington.—W. C. & A. N. Miller have plans by B. F. Meyers, 723-24 Bond Bldg., Washington, for 2-story hollow tile dwelling; cost \$6000.

Fla., Jacksonville.—J. C. Pritchard will erect 2-story frame residence; cost \$800.

Fla., Jacksonville.—Wm. Meier will erect residence; 1 story; frame; cost \$3500.

Fla., Lakeland.—Fred S. Duff has plans by Bryan & Poter, Rooms 11 and 12 Hardin Bldg., Lakeland, for residence; 54x72 ft.; frame; Neponset composition roof; Georgia pine floors; city lighting; construction to begin at once by day labor; all bids for contract rejected; cost \$6500; heating plant, about \$800, to be installed by owner. (Lately noted.)

Fla., Miami.—James H. Snowden is reported to erect residence at Miami Beach.

Fla., Miami.—R. P. Van Camp of Van Camp Packing Co., Indianapolis, Ind., is reported to erect residence.

Fla., Miami.—J. J. Bridges, 1132 Eighth St., will erect 20 dwellings at Sherman and Roosevelt Aves.; 24x22 ft.; wooden frame; shingle roof; wood floors; cost \$6000. (Lately noted.)

Ga., Atlanta.—F. C. Wilkerson & Bro., 72 W. 11th St., will erect 3 dwellings at 115-17-19 Columbia Ave.; lately noted; 6 rooms; frame; composition roof; wood floors; furnace heat; cost \$7500. (See Machinery Wanted—Heating Plant.)

Ga., Atlanta.—Brooks Morgan will erect residence on Andrews Ave.

Ga., Atlanta.—Dr. Chas. E. Boynton will erect residence on Habersham Rd.

Ga., Atlanta.—Toulman Williams has plans by W. T. Downing, Atlanta, for residence; brick and timber; cost about \$30,000.

Ga., Atlanta.—David Woodward is having plans prepared for residence on Wesley Ave.

Ga., Atlanta.—John J. Eagan will erect residence on Habersham Rd.

Ga., Columbus.—T. O. Ott will erect residence; frame; 9 rooms; cost about \$8000.

Ga., Savannah.—Leopold Adler has plans by Levy & Clarke, Savannah, for additions and alterations to residence; 2 stories; colonial porch columns; garage; brick, stone and iron fences; cost about \$8000.

Ky., Lexington.—Clarence J. Whitt will erect 2-story brick-vener residence; cost \$3000.

Ky., Louisville.—W. M. Reeser will erect 2 frame residences; cost \$4000.

Ky., Louisville.—H. L. Nevin will erect residence; 30x36 ft.; frame and brick; tile roof; cost \$7000; plans by owner; construction begun. (Lately noted.)

Ky., Louisville.—A. H. Wobben will erect residence; brick veneer; cost \$3000.

Ky., Louisville.—M. J. Murphy will erect brick residence; cost \$3500.

La., New Orleans.—J. S. Mire will erect 2-story frame duplex dwelling; cost \$5500.

La., New Orleans.—W. A. Stephenson will erect 1-story frame residence; cost \$4000.

Md., Baltimore.—James A. Paige will erect 4 dwellings at Ellamont and Windsor Aves.; 2 1/2 stories; brick; 16x53 ft.; cost \$10,000; Stanislaus Russell, Archt., 3509 Clifton Ave., Baltimore.

Md., Baltimore.—Geo. A. Cook, 35th St. and Old York Rd., has plans by W. B. Gerwig, 1025 N. Fulton Ave., Baltimore, for 32 residences on Old York Rd.; 14x45 ft.; 2 stories; brick; cost \$45,000. (Lately noted.)

Md., Baltimore.—Alexander Brown has plans by Baldwin & Pennington, Professional Bldg., Baltimore, for improvements to

residence at cost of \$3000; following contractors estimating: Morrow Bros., Fidelity Bldg.; Willard E. Harn Co., 213 N. Calvert St.; Consolidated Engineering Co., Calvert Bldg.; and John Waters Co., 23 E. Center St., all of Baltimore.

Md., Baltimore.—Dr. A. B. Chalmers, 1116 Munsey Bldg., will soon have plans prepared by Geo. R. Morris, Title Bldg., Baltimore, for residence in Guilford; 2 1/2 stories; cost about \$15,000.

Md., Mt. Washington.—Charles Kemper, Texas, Md., will not erect bungalows as lately reported.

Miss., Meridian.—H. C. Smith will erect residence; cost \$4000.

Miss., Meridian.—J. R. Whitaker will erect residence; cost \$4000.

Miss., Meridian.—Leslie Lide will erect residence; cost \$3500.

Mo., Kansas City.—Maurice Alden will erect residence in Mission Hills.

Mo., Kansas City.—C. D. Demaree will erect 4 residences; stucco veneer; cost \$9000.

Mo., Kansas City.—F. M. Peters will erect 2 stucco veneer residences; cost \$5000.

Mo., Kansas City.—Robt. M. Bruce will erect stucco and stone veneer residence; cost \$4000.

Mo., Kansas City.—Glencoe Realty & Investment Co. will erect stone and stucco veneer dwelling; cost \$5000.

Mo., Kansas City.—Carter T. Davis will erect brick and stucco veneer duplex dwelling; cost \$5000.

Mo., Kansas City.—Albert D. Flintum, Prest. Kansas City Feature Film Co., is having plans prepared for 3 residences on Holmes St.; cost about \$37,000.

Mo., Kansas City.—Frank Oliver will erect stone-veneer dwelling; cost \$3000.

Mo., Kansas City.—J. J. McElligott will erect residence; stone veneer; cost \$3000.

Mo., Kansas City.—H. A. Rhoades will erect 2-story brick-veneer residence; cost \$3000.

Mo., Kansas City.—Peter Soden will erect residence; brick veneer; cost \$6000.

Mo., Kansas City.—B. M. Darling will erect brick veneer residence; cost \$4000.

Mo., Kansas City.—J. C. Nichols will erect 10 residences; frame and stucco veneer; cost \$20,000.

Mo., Kansas City.—H. L. Wagensellar will erect residence; frame; cost \$4000.

Mo., St. Louis.—Geo. T. Scott will erect bungalow.

Mo., St. Louis.—Wm. J. Moxey will erect two 1-story dwellings; brick; cost \$3200; construction by owner.

Mo., St. Louis.—Jas. A. Davie will erect three 1-story dwellings; cost \$15,000.

N. C., Asheville.—W. O. Barnard, Baltimore, N. C., will erect 6-room bungalow; frame asphalt shingle roof; oak and pine floors; probably hot-water heat; electric lights; cost \$3000; construction begun. (Lately noted.)

N. C., Charlotte.—Torrence Henby will erect residence.

N. C., Charlotte.—Walter Lambeth will erect residence.

N. C., Charlotte.—Mrs. O. B. Sain is having plans prepared by F. L. Bonfoey, Charlotte, to erect residence; 2 stories; 12 rooms; cost \$2500.

N. C., Greenville.—L. W. Tucker will erect residence.

N. C., Wilson.—E. T. Barnes will erect residence; completion by Sept. 1.

Okla., Tulsa.—F. L. Dunn will erect 2-story frame residence; cost \$5000.

Okla., Tulsa.—A. H. Kerr will erect 1-story residence; cost \$6000.

Okla., Tulsa.—S. D. Hawley will erect residence; 1 story; brick; cost \$5000.

Okla., Tulsa.—Vance & Franklin will erect 1-story frame residence; cost \$3500.

Okla., Tulsa.—A. H. Kere will erect \$9000 residence.

Okla., Tulsa.—W. H. Cody will erect \$3500 residence.

S. C., Anderson.—Anderson Real Estate & Investment Co. will erect residence near Beaverdam.

Tenn., Huntland.—Jo Gill has plans by C. K. Colley, 33-40 Life and Casualty Bldg., Nashville, for 7-room bungalow; frame; concrete foundation; composition shingle roof; oak floors; electric lights; cost \$4000; day labor; owner buying materials.

Tenn., Knoxville.—James Allen Smith has plans by C. I. Barber and McMurry, Knoxville, for dwelling on Low's Ferry Road; hollow tile and stucco; slate or tile roof;

tile and hardwood floors; electric lights; cost \$20,000; construction begins July or August. (Lately noted.)

Tenn., Memphis.—A. F. Klu will erect 8-room residence; cost \$3250.

Tenn., Nashville.—C. L. Whitsett has plans by Geo. D. Waller, Nashville, for residence; 2 stories; brick veneer; warm air heat; plans ready June 15; date of closing has not been decided; contract let in detail.

Tenn., Nashville.—Mrs. M. C. Hall has plans by C. K. Colley, Nashville, for residence; 2 stories; brick veneer; bids opened June 17; contract let in detail; slate roof; oak floors; warm-air heat; electric light; cost \$6500.

Tex., Dallas.—Cobb & Crawford, Busch Bldg., have plans by Brickey & Brickey, Busch Bldg., Dallas, for residence; hollow tile with plastered exterior; Spanish-clay tile roof; hardwood floors; hot-water heat; electric lights; cost \$15,000; construction by owners, who may be addressed. (Lately noted.)

Tex., Dallas.—J. C. Webster has plans by Woerner & Cole, 513 Sumpter Bldg., Dallas, for residence; 40x56 ft.; interlocking hollow-tile and stucco; composition shingle roof; hardwood floors; cost \$16,000; construction begins in 60 days. (Lately noted.)

Tex., Dallas.—J. B. Ashberry will erect residence; 12 rooms; 2 stories; frame; cost \$3000.

Tex., Dallas.—E. D. Monzon will erect \$8000 residence.

Tex., El Paso.—Claude B. Hudspeth is having plans prepared by Trost & Trost, Mills Bldg., El Paso, for residence; 2 stories; 10 rooms; colonial type; red brick; cost \$15,000.

Tex., El Paso.—H. Brettler will erect bungalow; cost \$4000.

Tex., El Paso.—W. F. Kirby will erect residence; bungalow style; cost \$3000.

Tex., Houston.—C. G. Forester will erect \$3000 dwelling.

Tex., Houston.—E. L. Craun & Co. will erect 2 dwellings; cost \$6500.

Tex., San Antonio.—Mrs. T. J. Spelley will erect 2-room residence; cost \$4000.

Tex., San Antonio.—Geo. C. Elchitz will not erect residence this year. (Late report premature.)

Va., Norfolk.—E. S. Parker & Co. will erect 3 brick and frame residences; cost \$14,400.

Va., Norfolk.—Mordaunt Etheridge will erect 2-story brick residence; cost \$6600.

Va., Norfolk.—Mary C. McCuen will erect 2-story frame residence; cost \$3300.

Va., Norfolk.—W. S. Andrews will erect residence; 2 stories; brick; cost \$4250.

Va., Richmond.—Jas. D. Spencer will erect residence; 2 stories; frame; cost \$4250.

Va., Richmond.—John F. Crawford will erect 2-story brick residence; cost \$5600.

Va., West Point.—E. C. Veazey will erect residence.

GOVERNMENT AND STATE

Tex., Fort Sam Houston.—Stables.—Constructing Quartermaster receives bids until June 21 to erect 12 cavalry stables.

HOSPITALS, SANITARIUMS, ETC.

Miss., Laurel.—Jones County Supervisors will issue \$20,000 bonds to erect additions to South Mississippi Charity Hospital.

Tenn., Nashville.—Galloway Memorial Hospital has plans by Samuel Hannaford & Son, (Cincinnati), for hospital, and will let contract July 1; construction under direction Engineering Dept. Vanderbilt University, Prof. Chas. S. Brown in charge construction; mechanical equipment supervised by C. H. Simpson; cost \$300,000. (Previously noted.)

Tex., San Antonio.—Board of Managers of Southwest Insane Asylum, Bexar County, receives bids until June 22 to erect complete (including plumbing, heating and electric wiring) 3-story addition to female ward; plans and specifications at office C. V. Seutter, Archt., 424-25 Moore Bldg., San Antonio; Atlee B. Ayres, Prest. Board.

Va., Alexandria.—Alexandria Hospital has plans by Waddy B. Wood, 816 Connecticut Ave. N. W., Washington, D. C., for hospital; bids opened but contract not let; cost about \$50,000. (Lately noted.)

Va., Norfolk.—Hebrew Hospital and Home for Aged will erect hospital; Sam Winer, J. D. Gurfel and Morris Rotenberg, Building Com.

W. Va., Huntington.—Mearor & Sweeney, Huntington, are preparing plans for St. Francis Hospital. Architects wire Manufacturers Record: "Structure 68x112 ft.;

fireproof construction; brick, stone and terra-cotta; immediate cost \$30,000; ultimate cost \$200,000; bids about Sept."

HOTELS

Ala., Decatur.—Mrs. Minnie Lyons has plans by Joy & Gallup, 1915-22 Jefferson County Bank Bldg., Birmingham, for addition to Lyons Hotel; 60 rooms; 4 stories; brick; steam heat; cost \$30,000.

Ala., New Decatur.—Hotel Lyons is receiving bids to erect 60-room addition to building.

La., New Orleans.—Doullut & Williams have plans by Toledano, Wogan & Bernard, New Orleans, for hotel at Shell Beach; main dance hall, 75x75 ft.; will erect shed for automobiles, provide tennis courts, etc.

N. C., Charlotte.—Selwyn Hotel Co., Incptd. with \$50,000 capital, by J. J. Cain, Columbia, S. C.; Samuel Baron and Jules Hymann, both of Augusta, Ga.; leased Selwyn Hotel and will expend \$15,000 to \$20,000 to improve building; install new furniture, fixtures, etc. (Lately noted.)

Tenn., Newport.—J. M. Jones has plans for store and hotel building. (See Stores.)

MISCELLANEOUS

Ark., Hot Springs.—Earn.—Bids are being received to erect 3 barns on Essex Park property; plans and specifications from Sam Davis at Cooper Bros.

Ark., Paragould.—Clubhouse.—Paragould Country Club will erect clubhouse.

D. C., Washington.—Stable.—Ralph Barrell has plans by Julius Germuller, 304 G St. N. W., Washington, for 1-story brick stable; cost \$5000.

Fla., Eastport.—Lumber Shed.—Carpenter & O'Brien Co., Jacksonville and Eastport, will build 980x30-ft. shed and monorail for dressed lumber; replace burned shed, etc.

Fla., Gainesville.—Clubhouse.—Palm Point Country Club will erect clubhouse at Robertson's Point; 30x50 ft.

Ga., Columbus.—Stables.—Mrs. W. T. Heard and A. J. Treague will expend \$7000 to improve stables.

Ga., Savannah.—Alliance.—Jewish Educational Alliance has plans by Levy & Clarke, Savannah, to remodel basement of building, including plastering, tiling, showers and plumbing fixtures, cement flooring, electric lighting system and exhaust fans.

Okla., Tulsa.—Stable.—F. M. Wooden will erect concrete block stable to cost \$2000 and 1½-story frame residence to cost \$1500.

S. C., Florence.—Clubhouse.—Pinewood Club, E. E. Brunson, Prest., will erect clubhouse; 45x80 ft.; pine log construction; dance hall with maple floor; tennis courts, etc.

Va., Charlottesville.—Grandstand, Barns, etc.—Albemarle Horse Show Assn. will erect grandstand, racing barns, etc. (See Road and Street Work.)

Va., Richmond.—Clubhouse.—Hermitage Golf Club acquired 100-acre site near Lake-side Park; will remodel residence for clubhouse, provide 18-hole golf links and tennis courts; cost about \$60,000. (Lately noted.)

Tex., San Antonio.—Clubhouse.—San Antonio Country Club is having plans prepared by George Willis, San Antonio, for clubhouse; fireproof; stucco construction; 1 and 2 stories; second story to contain shower baths, lockers and lounge room; outdoor swimming pool 30x75 ft.; cost \$60,000. (Noted in April.)

RAILWAY STATIONS, SHEDS, ETC.

Ala., Aldrich.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will erect frame combination depot to replace burned structure; white and colored waiting-rooms, each 11.9x14 ft.; freight room, 24x30 ft.; offices, 9.6x25.6 ft.; construction by company's force.

Ala., Van Dorn.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will erect frame combination depot and stock pen; white and colored waiting-rooms, each 10x15 ft.; offices, 8x24 ft.; freight room, 35x30½ ft.; construction by company's force.

D. C., Washington.—Southern Ry. Co. will erect office building. (See Bank and Office.)

Ky., Crab Orchard.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, Ky., is reported to erect depot.

N. C., Kanapolis.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will erect brick freight depot and convert present combination depot into passenger station; plans include chert passenger platform and electric-light installation.

Okla., Tulsa.—Midland Valley Ry. Co., C. Kaighn, Ch. Engr., Muskogee, Okla., will erect passenger station; cost \$50,000.

Tex., Dallas.—Dallas Interurban Terminal Assn., Chas. F. Wallace, Prest., will erect trainmen's building; 2 stories; second floor for shower baths, lockers, reading and lounge rooms; cost \$5000.

Tex., Kirkland.—Fort Worth & Denver City Ry., R. C. Gowdy, Ch. Engr., Fort Worth, will erect depot, stock pens and cotton platform.

SCHOOLS

Ark., Jonesboro.—Trustees are having plans prepared by L. M. Weathers, Memphis, Tenn., for high school; auditorium, gymnasium, domestic science and chemistry departments.

Ala., Mobile.—Mobile County School Commissioners will petition County Board for election on \$150,000 bonds for schools; this to take place of similar issue previously noted voted.

D. C., Georgetown.—Regents of Georgetown University will begin erection of \$125,000 building in Sept., which will be first of 8 buildings to be erected.

Fla., Arcadia.—DeSoto County Board of Public Instruction receives bids until July 17 to erect frame schools at Fort Bassenger, Owens and Murdock; brick building at Charlotte Harbor (recent bids rejected); also remodel school at Turo; plans and specifications at office William Bradford, Archt., Arcadia, and Jas. O. Bickley, County Supt., Arcadia. (Lately noted.)

Fla., Arcadia.—Board of Public Instruction will soon invite bids to erect several rural school buildings.

Fla., Bartow.—Bartow Sub-School Dist. plans to issue \$20,000 bonds to erect additional building to Summerlin Institute. Address Dist. School Trustees.

Fla., Charlotte Harbor.—See Fla., Arcadia.

Fla., Cocoa.—Board of Public Instruction, Brevard County, receives bids until July 17 to erect graded and high school in Special Tax Dist. No. 2; reinforced concrete; fireproof; hollow interlocking tile or brick; bids considered on each kind of structure; plans and specifications at office Mark & Sheftall, Archts., Jacksonville; Edwin E. Macy, Secy., E. Svedellus, Chrmn. Board. (Lately noted to cost \$40,000.)

Fla., Enterprise.—Board Public Instruction, C. R. M. Sheppard, Secy., receives bids until July 3 to remodel and erect addition to 6-room building; plans and specifications at office F. N. Miller, Archt., Oakland Ave., De Land, Fla.; completion by Oct. 1.

Fla., Glendale.—Walton County School Board has plans by S. J. Welch, Pensacola, Fla., for school; 2 stories; 60x70 ft.; frame; composition or tar and gravel roof; cost \$7000; bids opened latter part of July. Address D. N. Trotman, DeFuniak Springs, Fla.

Fla., Jacksonville.—Board of Public Instruction of Duval County, F. A. Hathaway, Supt., receives bids until July 15 to erect school in West Springfield; 8 rooms; tar and gravel roof; reinforced concrete floors; cost about \$45,000; R. A. Benjamin, Archt., 711 Bisbee Bldg., Jacksonville. (Previously noted.)

Fla., Jacksonville.—Duval County Board of Public Instruction opened bids to erect school at South Jacksonville and 8-room addition to West Riverside School; lowest bidders are W. P. Richardson and R. V. Labarre, both of Jacksonville; plans by Mark & Sheftall, Jacksonville, for South Jacksonville school call for 230 ft. with 3 wings 90 ft.; brick bearing walls; reinforced concrete floor slabs; first floor combination concrete joist; second floor hollow tile; tile roof; 16 rooms; separate bids for plumbing and heating; cost \$80,000; H. J. Klutho, Archt., Jacksonville, for West Riverside school.

Fla., Miami.—School Board, Dist. No. 12 ordered vote on \$10,000 bonds to erect reinforced concrete fireproof school building.

Fla., Murdock.—See Fla., Arcadia.

Fla., Perrine.—Perrine School Dist. No. 12 votes July 18 on \$10,000 bonds to erect school building. Address Dist. School Trustees.

Ga., Atlanta.—County Board of Education has plans by J. C. Battle and A. Barili, Atlanta, for school building in Buckhead section, North Atlanta; 2 stories and basement; first floor, 4 class rooms; second floor, 2 open-air class rooms; auditorium seating 400; stone mountain granite; tile roof.

Ga., Milledgeville.—Georgia Military College will erect addition to barracks; completion by September.

Ga., Rockmart.—Rockmart School Dist. votes July 15 on \$30,000 bonds to erect and equip school; O. R. Summerville, Chrmn. Trustees.

Ky., Paducah.—McCracken County Board of Education, M. V. Miller, Supt., will erect school building to replace High Point school lately damaged by storm; 26x24 ft.; walls 10 ft.; bids opened June 17.

Ky., Marion.—Trustees of Marion High School ordered election for July 1 on \$10,000 bonds; if voted, County Board of Education will supplement like amount and \$20,000 building erected.

La., Baton Rouge.—Robt. A. Hart, Chrmn. Bldg. Com. School Dist. No. 9, of East Baton Rouge, 444 Lafayette St., receives bids until July 10 for material and erecting 3 brick schools; separate bids for each building, exclusive of plumbing, heating and electric wiring; separate bids for last-named work on each building; plans and specifications at office Ben J. Goodman, Archt., 833 N. Boulevard, Baton Rouge. (Lately noted.)

La., Montgomery.—Grant Parish School Board has plans by J. W. Smith, Monroe, La., for school; 6 rooms and auditorium; brick; composition roof; bids opened June 27. Address W. O. Harrison, Montgomery. (Previously noted.)

Md., Baltimore.—Johns Hopkins University, Dr. Frank J. Goodenow, Prest., will erect Hygiene and Public Health building; cost about \$200,000.

Miss., Brooksville.—E. M. Chilcote, Clerk Board of Mayor and Aldermen, receives bids until July 4 to erect school, including heat; exclusive of plumbing and wiring; plans by P. J. Krouse, Meridian, Miss., call for structure 55x70 ft.; 2½ stories; brick; composition roof; wood floors; electric lights; hot-air heat; cost \$800. (Lately noted.)

Miss., De Lisle.—See Miss., Gulfport.

Miss., Ellisville.—City votes July 1 on \$2000 bonds to repair and equip high school building.

Miss., Gulfport.—Board of Supervisors will issue \$9000, \$10,000 and \$9000 bonds, respectively, to erect schools in De Lisle, Advance and Wool Market Consolidated School districts.

Miss., Independence.—Independence Consolidated School Dist. will issue \$5000 bonds to erect and equip school; J. A. Wooten, Clerk Board of Supervisors.

Md., Linthicum Heights.—Seth H. Linthicum, Chrmn. Building Comm., care County School Supt., Anne Arundel County, Annapolis, Md., receives bids until June 23 for Linthicum Heights-Shipley Public School; 53x70 ft.; brick; slate roof; wood floors; plans and specifications by H. Crisp, Calvert Bldg., Baltimore; at office of Mr. Linthicum, Linthicum Heights, or at 217 St. Paul St., Baltimore.

Miss., Meridian.—R. L. Blanks, City Clerk & Treas., receives bids until June 27 for work at Manual Training School and Stevenson Primary School; plans and specifications at office C. M. Card, City Building Inspector.

Miss., Meridian.—R. L. Blanks, City Clk. and Treas., receives bids until June 27 for improvements to Manual Training School and Stevenson Primary School; plans and specifications at office C. M. Card, City Bldg. Inspector.

Mo., Flat River.—Board of Education, C. E. Norwine, Secy., receives bids until June 27 to erect school building; 2 stories; auditorium; brick; plans and specifications at office of Mr. Norwine.

Mo., Kansas City.—School Dist. of Kansas City, J. B. Jackson, Jr., Secy., will erect two 1-room school buildings for boys.

Mo., Madison.—Madison Special School Dist. will probably vote after Sept 5 on bonds to erect school; mistake in \$16,000 bond issue lately noted voted; H. M. Featherstone, Clerk, School Board.

Mo., Rich Hill.—Board of Education, Carl Stonebraker, Secy., has plans by C. M. Williams, 726-7 Finance Bldg., Kansas City, for \$35,000 school building; 2 stories and basement; 16 rooms; pressed brick; Carthage limestone trim; steam heat; tile and cement floors; fire escapes; auditorium; physical-culture laboratory; lecture-room; bids opened June 20; completion Nov. 20. (Lately noted.)

Mo., Warrensburg.—Central Wesleyan College is having plans prepared by P. J. Bradshaw, International Life Bldg., St. Louis, for science building; 3 stories; 50x120 ft.; cost \$60,000.

N. C., Asheville.—County Board of Education receives bids until June 21 to erect school building at West Asheville; plans and specifications at office County Supt. of Edu-

ation, Courthouse, Asheville, and C. H. Chann, West Asheville. (Previously noted.)
N. C. Asheville.—County Board of Education receives bids until June 26 to erect West Buncombe school; plans and specifications at office County Supt. of Education, Court House, and T. E. Davis, 20½ Spruce St., Asheville.

N. C. Ayden.—See N. C., Greenville.

N. C. Bethel.—School Board, M. O. Blount, Secy., will erect school; 10 rooms and auditorium to seat 500; brick; metal or slate roof; cost \$18,000; heating plant, \$1500; bids opened June 20. (Lately noted to have voted \$20,000 bonds.)

N. C., Greenville.—Pitt County Board of Education, S. B. Underwood, Secy., receives bids July 3 to erect school buildings as follows: Two-room building in Carolina Township, 1-room school in Ayden, colored district No. 1, Chicod Township, and No. 3 Greenville Township, 1-room addition in Swift Creek Dist. No. 5; plans and specifications at office County Supt. of Schools, Greenville.

N. C., Huntersville.—Huntersville School Dist. has plans by L. L. Hunter, Charlotte, N. C., and opens bids July 3 to erect schools; 12 rooms; brick; joist floor construction; steam heat; cost \$16,000. Address Architect. (Lately noted.)

N. C., Littleton.—Littleton Graded School Dist. voted \$15,000 bonds to erect school; P. M. Stallings, Chrmn., Board County Commrs., Macon, N. C. (Lately noted.)

N. C., Morgantown.—North Carolina School for Deaf and Dumb will erect addition to main building for bakery and kitchen; 40x60 ft.; 2 stories; brick; slate roof; concrete floors; electric lights from private plant; cost \$3000; construction begun. Address Board of Directors.

N. C., Raleigh.—Raleigh Township School Comm., B. F. Montague, Chrmn., receives separate bids from local contractors until June 26 to erect additions to Washington and Carnegie Schools; plans and specifications at office J. M. Kennedy, Archt., 301 Merchants' National Bank Bldg., Raleigh.

Okla., Ada.—City will vote on \$90,000 bonds to erect high school with auditorium to seat 1200 to 1500. Address Board of Education.

Okla., Atoka.—City voted bonds to erect high school. Address The Mayor.

Okla., Dewey.—School Board, P. R. Chamberlain, Chk., opens bids June 25 to erect annex to school; 2 stories and basement; fireproof; Hawk & Parr, Archts., Oklahoma City. (Lately noted.)

Okla., Marshall.—City is reported to issue \$20,000 school bonds. Address The Mayor.

Okla., Ninnekah.—School Board of Consolidated Dist. No. 51, D. A. Wood, Chk., receives bids until June 26 to erect 3-room brick addition to school building; plans and specifications at office Bramblet & Hausman, Archts., Oklahoma City, and Mr. Wood as above; completion by Sept. 15. (Lately noted.)

Okla., Pecos.—Hawk & Parr, Oklahoma City, are not preparing plans for school, as lately reported.

Okla., Tishomingo.—School Dist. No. 20 has plans by Jewel Hicks, Durant, Okla., for school addition; 48x60 ft.; brick and concrete; tin shingle roof; wood floors; cost \$12,000; steam heat, \$2000; contract let June 26; construction begins July 1. Address J. C. Roan, Tishomingo. (Lately noted.)

S. C., Greenville.—Trustees have plans by J. E. Sirrine, Greenville, for ward school building; 1-story; will soon invite bids; contemplate erecting other ward schools. (Previously noted.)

S. C., Florence.—Florence Dist. School Board postponed indefinitely erection of high school. (Previously noted.)

S. C., Lowndesville.—School Board is receiving bids to erect brick school building; plans at office A. V. Barnes, Secy., and Casey & Fant, Archts., Anderson, S. C.

S. C., Olympia.—Olympia School Dist. Trustees ordered vote June 27 on \$20,000 bonds to erect, equip and improve schools; F. C. Gilmore, Chrmn.

Tenn., Harriman.—School Board has plans by Manley & Young, Lexington, Ky., for school for which \$50,000 bonds were lately noted.

Tenn., Harriman.—City is having plans prepared by Manley & Young, Holston Natl. Bank Bldg., Knoxville, Tenn., and Strand Theatre Bldg., Lexington, Ky., for \$50,000 school building. (Lately noted.)

Tenn., Jacksboro.—County Board of Education, John Godley, Jr., Chrmn., Newcomb, Tenn., will erect brick school at Demory; bids opened June 17.

Tex., Austin.—Regents University of Texas have plans by Cass Gilbert, 11 E. 24th St., New York, for education building; cost \$150,000 to \$200,000.

Tex., Bailey.—Bailey Dist. No. 63 voted \$10,000 bonds to erect school building. Address Dist. School Trustees.

Tex., Beaumont.—City votes July 18 on \$300,000 bonds to erect central high school and 4 ward schools. Address The Mayor. (Lately noted.)

Tex., Cumby.—Cumby Ind. School Dist. Trustees, C. M. Patton, Secy., will erect 2-story 4-room addition to school; Geo. Lindsey, Archt., Greenville, Tex.; bids opened June 19.

Tex., Cibola Valley.—School Trustees, through Reuter & Harrington, Archts., Frost Bldg., San Antonio, Tex., receive bids until June 23 to erect high-school building; 2 stories; brick and tile.

Tex., Fort Worth.—Rosen Heights Independent School Dist. voted \$3000 bonds to erect school. Address Dist. School Trustees.

Tex., Fort Worth.—Diamond Hill Independent School, J. W. Richardson, Secy., receives bids to erect 1-room frame building; 14x14; barn; fence around building and barn. (See Machinery Wanted—Pump Jack; Engine.)

Tex., Hamlin.—Oscar Hudson, business manager Central Nazarene University, is receiving bids to complete administration building; 4 stories; 109x112 ft.; 2 stories already completed; plans at university office.

Tex., Houston.—City and Harris County will jointly erect 3-room school building near Houston Harbor. Address The Mayor.

Tex., Llano.—Independent School Dist. No. 1 voted \$6000 bonds to erect addition to school building. Address Dist. School Trustees.

Tex., Rusk.—City voted \$12,000 bonds to erect addition to high school. Address The Mayor.

Tex., San Antonio.—School Board will erect 2-story addition to school in West Euclid Ave.; cost \$9000.

Tex., San Antonio.—Common School Dist. No. 6 votes July 10 on \$5000 bonds to erect school. Address Dist. School Trustees.

Tex., Sherman.—Austin College has plans by C. D. Hill & Co., Dallas, for administration building; 60x185 ft.; 2 stories and basement; concrete and brick; mansard roof; tile floors; connected with separate heating plant; separate lighting plant already erected; cost \$100,000; date opening bids not decided. (Lately noted.)

Tex., Von Ormy.—Bexar County School Dist. No. 27 voted \$7000 bonds for school building. Address Dist. School Trustees.

Va., Blacksburg.—Virginia Polytechnic Institute Alumni, John W. Stull, Prest., Oriskany, Va., plans to erect clubhouse on campus; cost \$10,000.

Va., Norfolk.—Seventh Ward School Trustees opened bids to erect 2-story brick addition to James Monroe school; J. A. Turpin, Norfolk, is lowest bidder at \$4445.

Va., Roanoke.—School Board, J. A. Page, Secy., adopted plans for Melrose and Belmont schools. (Lately noted.)

Va., Stanley.—School Board, Stanley Dist. No. 7, receives bids until June 24 to erect school building; 3 stories; brick; plans and specifications at office T. M. Keyser, Clerk, Stanley. (Lately noted.)

Va., Troutville.—Amsterdam Dist. School Board, T. H. Potter, Clerk, will erect high school; about 50x70 ft.; frame or brick cased; slate or metal shingle roof; wood floors; acetylene gas lighting; cost \$6000; plans furnished by State; bids opened June 20. Address Mr. Potter. (Lately noted.)

Va., Weyers Cave.—Middle River School Board will erect school; 3 stories; 48x79 ft.; brick veneer; tin roof; wood floors; electric lights; cost \$10,000; hot-water heat, \$1200; bids opened June 19. Address John H. Hinegardner, Chrmn., School Board. (Lately noted.)

W. Va., Greenbank.—Board of Education of Greenbank Dist. receives bids until July 3 to erect school building; plans and specifications at office J. W. Goodsell, Prest., School Board, Durbin, W. Va., and Chas. W. Bates, Archt., 701 Bank Bldg., Wheeling, W. Va.

W. Va., Barboursville.—Barboursville Ind. School Dist. has plans by S. V. Anderson, Barboursville, for school addition; 4 rooms; brick; tin roof; wood floors; gas heat; electric lights; bids received by D. Blain Shaw, Secy., Board of Education, until June 20; voted \$4500 bonds. (Lately noted.)

Va., Buchanan.—Board of Public Instruc-

tion will erect \$15,000 high school; Carey Breckenridge, County Supt., Fincastle, Va.

W. Va., Charleston.—Union Dist., Kanawha County, votes June 23 on tax to erect schools at Mullins, Thaxton, Guthrie and Rocky Fork and addition at Cross Lanes; J. B. Finney, Prest., Board of Education.

W. Va., Charleston.—Charleston School Dist. voted \$125,000 bonds. Address Dist. School Trustees. (Lately noted.)

W. Va., Clarksburg.—Clark School Dist. defeated \$43,000 bonds to erect school. (Lately noted.)

W. Va., Morgantown.—State Board of Control, Charleston, W. Va., is reported to let contract about July 30 to erect girls' dormitory at West Virginia University; 3 stories and basement; concrete foundation; brick; stone trim; probably slate roof; oak floors; cost \$100,000; plans by Paul A. Davis 3d, 1713 Sansom St., Philadelphia, in hands of board July 15. (Previously noted.)

W. Va., Slab Fork.—Slab Fork Dist. voted \$30,000 school bonds. Address Dist. School Trustees.

STORES

Ala., Fort Payne.—H. B. Campbell plans to erect store building.

Ark., Little Rock.—M. B. Sanders will erect 2-story brick building to be occupied by J. T. Lloyd Co.; 50x140 ft.; 2 rooms.

D. C., Washington.—Frank Carpenter has plans by Clark Waggaman, 1211 Connecticut Ave., N. W., Washington, to remodel 3-story brick store, 1143 Connecticut Ave., N. W.; cost \$3800.

Fla., Chipley.—T. M. Watts has plans by S. J. Welch, Pensacola, Fla., and opens bids July 1 to erect business building; 80x90 ft.; 2 stories; brick and frame; composition roof; stoves; city lighting; cost \$12,000. Address owner or architect.

Fla., De Land.—W. D. Haynes will erect 2-story-and-basement brick building.

Fla., Jacksonville.—J. J. Hamilton will erect 3-story brick building.

Fla., Miami.—Hickson & Whitener are reported to erect theater building at 12th St. and B Ave.

Fla., Miami.—Wayne Realty & Investment Co., Geo. S. Reid, Secy., and Gen. Mgr., will expend \$40,000 to remodel Gertie Reynolds Theatre and Sewell store; former structure to be converted into office building with 3 stories on lower floor; 22 offices on second floor; will install front in latter structure 50 ft. long; 104 lin. ft. display cases; 350 sq. ft. show windows; tile flooring; plate glass windows, marble base, with prism glass above; also make entire structure 2 stories.

Fla., Miami.—R. B. Porter will erect 1-story store building on Avenue D; concrete; 3 store rooms; cost \$5000.

Fla., Orlando.—Knights of Pythias and others will erect store and lodge building. (See Association and Fraternal.)

Fla., Tallahassee.—Levy Bros. have plans by Fred T. Lack & Son, Tallahassee, to erect store and office building; 40x90 ft.; brick and steel; concrete roof.

Ga., Atlanta.—Rosenfeld Co. is having plans prepared by A. F. N. Everett, Atlanta, for 3-story brick building; 48x75x97 ft.; cost \$7500.

Ga., Atlanta.—Rosenfeld & Co. and Drucker will erect \$7500 business building.

Ga., Macon.—Leon S. Dure will erect store building on Mulberry St.

Ky., Ghent.—Carroll Lodge, No. 45, I. O. O. F., will erect lodge and store building. (See Association and Fraternal.)

Ky., Louisville.—Enterprise Realty Co. will erect store building; brick; cost \$8000.

Mo., Rhinehart.—J. M. Milligan will erect business building.

Md., Baltimore.—Lohmuller Bldg. Co., 1735 N. Broadway, will erect 2-story building, Greenmount Ave. and 28th St.; first floor for drug store.

Md., Baltimore.—Wm. F. Hempel, Dennison and Elgin Aves., has plans by Herbert G. Jory, 1408 Munsey Bldg., Baltimore, for 2-story building, North Ave. and 10th St.; 126x208 ft.; to contain 13 storerooms and garage; fireproof; tar and gravel roof; concrete floors; steam heat; cement sidewalks; cost \$30,000.

Mo., Kansas City.—Metropolitan Building Co. will erect store and office building. (See Bank and Office.)

Mo., Kansas City.—Bryan Coal & Grain Co. will erect metal clad business building; cost \$6000.

Mo., St. Louis.—Wm. Melitto, Prest., Melitto Fish & Oyster Co. will erect fireproof build-

ing to contain several stores; cost, including site, \$85,000.

Mo., St. Louis.—Clara Investment Co. will erect store and apartment building; will contain store room and 7 apartments; cost \$50,000.

N. C., Mt. Gilead.—Frank McAuley will erect business building to replace structure lately noted damaged by fire; 60x100 ft.; brick; tin roof; cement floors; electric lights; cement sidewalks; cost \$6000.

N. C., Whiteville.—Oscar High has plans by J. F. Leitner, Wilmington, N. C., for lately noted mercantile building; 40x55 ft.; brick; metal roof; wood floors over concrete; electric lights; freight elevator; cost \$5000. (See Machinery Wanted—Elevator; Steel Construction; Plate Glass; Skylights.)

Okla., Mangum.—Lee Hentley and Mrs. Irene Monroe will erect 4 brick business buildings; 4 stores each 25x100 ft.; 1 story; construction begins July 1.

S. C., Charleston.—Carolina Sales Realty Co. will expend \$5000 to improve and erect addition to building.

S. C., Spartanburg.—J. D. Collins is having plans prepared by L. D. Proffitt, Spartanburg, to rebuild burned store; 2 stories; front; ornamental ceiling; cost \$10,000.

Tenn., Newport.—J. M. Jones has plans by Manley & Young, Lexington, Ky., and Knoxville, Tenn., for store and hotel building; 84x100 ft.; ordinary construction; gravel roof; steam heat; electric lights; cost \$30,000.

Tex., Beaumont.—Mrs. E. Nulle will erect store and apartment building. (See Apartment Houses.)

Tex., Beaumont.—Caswell Estate will erect 2-story brick building to be occupied by Chambers Hardware Co.; cost \$16,000.

Tex., Beaumont.—Rosenuth Dry Goods Co. acquired building on Pearl St. and will remodel and enlarge.

Tex., Corsicana.—C. L. Jester will remodel 3 stores on Beaton St., to be occupied by T. J. York and P. Samuels.

Tex., El Paso.—Jolly & Morris will erect business building, Florence and Montana Sts.; 1 story; cost \$6000.

Tex., El Paso.—Julius A. and Robert Krauer plan to convert Mt. Sinai Temple into salesroom, to be occupied by El Paso Phonograph Co.; also having plans prepared by Trost & Trost, El Paso, for \$9000 building; 25x120 ft.; brick; 2 stories and basement; heating plant; store rooms on first floor; apartments above.

Tex., Fort Worth.—E. D. Farmer will let contract in about 10 days to erect 1-story brick building at 11th and Houston Sts.; 150x60 ft.

Tex., Jefferson.—B. F. Sherrill, Texarkana, Tex., will erect store building to replace structure lately noted damaged by fire; 50x75 ft.; brick; metal or gravel roof; concrete floors; electric lights; construction begins about Sept. 1.

Tex., San Antonio.—W. C. Silliman will erect several buildings on South Flores St.

Tex., Temple.—W. A. Brady and B. F. Smith will erect business building; 90x110 ft.

Va., Bedford City.—People's Bank will erect store, bank and office building. (See Bank and Office.)

Va., Norfolk.—W. H. Andrews will erect brick building; cost \$4250.

Va., Norfolk.—D. Lowenberg Estate opened bids to erect store building; 50x150 ft.; 1 story; provision for 5 additional stories; fireproof; Barrett specification roof; concrete floors; steam heat; Baker & Brinkley, Norfolk, are lowest bidders at \$946; Neff & Thompson, Archts., Norfolk. (Lately noted.)

Va., Richmond.—Arcadia Amusement Corp., inceptd. to erect theatre, store and arcade building. (See Theatres.)

Va., Richmond.—Mann S. Valentine will expend \$5400 to repair brick building at 1227 Hull St.; cost \$5400.

THEATERS

Ala., Fort Payne.—Miss Leona Thomason will expend \$5000 to remodel opera-house for moving-picture theater.

Fla., Miami.—W. B. Ogden will erect theater building to be leased by J. C. Boss, Prop. Fotosho; 2 stories; plans include 14 office rooms.

Tenn., Rockwood.—J. M. Colvin and Walter Howard have plans by W. A. Gasland to convert Cash Bazaar Bldg. into moving picture theatre; construct stage, etc.; provide seating capacity of 500; cost \$4000. (Lately noted.)

Tex., Brownwood.—Southern Amusement Co. will erect alrdome on Fisk St.; brick.

Va., Richmond.—Arcadia Amusement Corp., Incptd. with \$300,000 capital; John T. Anderson, Pres.; J. J. Poilard, V. P. and Treas.; both of Richmond; G. L. Stabler, Secy., Washington, D. C.; will erect theatre building on Broad St.; entrance to theatre through arcade with glass roof; musicians' gallery at end of arcade; glass roofed court with display fountain beyond; main theatre to seat 2500; roof garden, 2000; moving stairways, etc.; plans also include number of shops, etc.

WAREHOUSES

D. C., Washington.—Boyle-Robertson Construction Co., 1516 H. St., N. W., will erect warehouse; 5 stories; reinforced concrete; steel-sash windows; cost \$24,000.

Fla., Miami.—Frank T. Budge Co. will erect addition to warehouse; cost \$4000.

Fla., Tampa.—Gulf Fertilizer Co. will erect warehouse in Gary; 54x74 ft.; cost \$3000.

N. C., Ahoskie.—Ahoskie Planters' Ware-

house, Incptd. with \$100,000 capital by H. S. Basnight, C. C. Haggard and John C. Goode, all of Ahoskie.

N. C., Asheville.—American Feed Milling Co. will erect warehouse; completion in about 30 days.

N. C., Durham.—W. P. Henry Tobacco Co. let contract at \$5000 to W. C. Gibson, Durham, to erect warehouse; capacity 1,500,000 lbs.; 1 story; brick; completion by Sept. 10. (Lately noted.)

Okla., Braman.—Oil Well Supply Co. will erect supply house.

Tenn., Chattanooga.—C. A. Lively and others will erect Chattanooga Cotton Warehouse.

Tex., Houston.—Missouri, Kansas & Texas Ry., L. F. Lonnbladh, Ch. Engr., Dallas, will erect cotton warehouse; 1000x100 ft.; reinforced concrete; fireproof; divided into several compartments; fire equipment; platforms on either side; cost \$50,000; completion by August 15. (Previously noted.)

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—Chester A. Snow let contract to Geo. A. Acorn, 1129 Columbia Rd. N. W., Washington, to remodel 4-story brick apartment; cost \$11,000; plans by B. Stanley Simmons, 1340 New York Ave. N. W., Washington.

Fla., Miami.—A. H. Adams let contract to erect store and apartment building. (See Stores.)

Ky., Lexington.—Morris G. Levy let contract to S. F. McCormick Lumber Co., Lexington, to erect apartment-house.

Ky., Lexington.—C. B. Willett let contract to R. S. Webb & Co. to erect 3-story apartment-house; Manley & Young, Architects, Holston National Bank Bldg., Knoxville, Tenn. and Strand Theatre Bldg., Lexington.

Okla., Tulsa.—E. O. Boydell has contract to erect 7 apartments to cost about \$25,000 each; construction begun on initial structure to be known as Smith Apartments, at Fifth and Ellwood Sts.; kitchen floor hard maple; other floors matched polished oak; front entrance Italian marble, with marble steps and tile floor; stonework Carthage or Phoenix quarry; 5-room suites; No. 2 elevator; speaking tubes to basement; electrical control for outer door; sleeping porches.

Tenn., Memphis.—Mrs. Sada Johnson let contract to Chas. H. Sims, 335 S. Main St., Memphis, to erect apartment-house; 45x65 ft.; rough-texture brick veneer; Carey composition shingle roof; hardwood floors; city lighting; cost \$7000; steam heat, \$800; H. T. McGee, Archt., Tennessee Trust Bldg., Memphis. (Lately noted.)

Tenn., Nashville.—Foy-Procter Co., Nashville, general contractors to erect Ellison Apartments for Norman Farrell and Thos. Smith, let following sub-contracts: Carpentry and mill work, E. & N. Mfg. Co.; roofing and sheet metal work, J. S. Minton & Co.; painting, Otto Hylen; plastering, Southern Plastering Co.; electrical work, Braid Electric Co.; brick work, Nashville Brick & Tile Co.; sash doors and glazing, The Riddle Co.; excavation, foundation and white stone veneer, M. A. Lightman & Co.; plumbing and heating, T. J. Mooney & Co.; cut stone, Nashville Cut Stone Co.; finish hardware, Gray & Dudley Hardware Co.; Whitman Hardware, E. T. Kirkpatrick & Co., all of Nashville; plans by Thos. W. Gardner, Nashville, call for 12 suites; fireproof; reinforced concrete; slate or tile roof; concrete floors with hardwood surface; & Young, Architects, Holston National Bank Bldg., Knoxville, Tenn., and Strand Theatre Bldg., Lexington, Ky. (Lately noted.)

ASSOCIATION AND FRATERNAL

N. C., Lexington.—Erlanger Cotton Mills let contract to erect addition to Y. M. C. A. (See Dwellings.)

Tex., Brady.—A. F. & A. M. let contract to erect Masonic temple; 32½x90 ft.; 3 stories; reinforced concrete; fireproof; cost \$15,000.

BANK AND OFFICE

Ark., Altheimer.—Bank of Altheimer let contract to erect brick building; cost \$5000.

Fla., Orlando.—Bank of Orange let contract to J. F. Ange, Orlando, to erect bank building; 2 stories; brick.

Ga., Augusta.—Georgia Railroad Bank has plans by and let contract Geo. W. Muller Fixture Co., Atlanta, to remodel interior of bank; rearrange fixtures, provide lobby, mosaic floors, new cabinet work, etc. (Lately noted.)

La., DeRidder.—A. J. Armstrong, Shreveport, La., prepared plans to remodel portion of building for Beauregard Trust & Savings Bank; 25x48 ft.; brick and marble; electric lights; contract let and construction begun.

Mo., Kennett.—Cotton Exchange Bank let contract to W. W. Taylor & Sons, Cape Girardeau, Mo., to erect bank and office building; 20x84.3½ ft.; 2 stories; semi-fireproof; asbestos built-up roof; concrete and tile floors; cost \$18,000; steam heat, \$1000; Clymer & Drischler, Architects, Wainwright Bldg., St. Louis. (Lately noted.)

Tenn., Chattanooga.—Volunteer State Life Insurance Co., James Bldg., has plans by Barnwell & Barnwell, 516 Hamilton National Bank Bldg., Chattanooga, and let contract at about \$330,000 to H. D. Watts Co., Atlanta, Baltimore and Washington, to erect building; 12 stories and basement; fireproof; tar and gravel roof; reinforced concrete; 94x136 ft.; vitreous-brick exterior except first and second floors and cornice, which are terra cotta; wood floors except Tennessee marble corridor floors; probably Alabama marble wainscoting; 4 passenger and 1 freight elevator; lower floor stores. (Lately noted.)

Tenn., Nashville.—German-American Bank let contract to Chas. W. Rives, Nashville, to erect bank building.

Tenn., Newport.—First National Bank let contract to J. K. Jaynes & Bro., Johnson City, Tenn., to erect bank building; Manley & Young Holston National Bank Bldg., Knoxville, Tenn. and Strand Theatre Bldg., Lexington, Ky. (Lately noted.)

Tex., Ralls.—Harrison & Kerr, Plainview, Tex., have contract to erect bank building; reinforced concrete and brick; cost \$20,000.

Va., Covington.—Covington Savings Bank let contract to C. B. Ergenbright, Covington, to erect bank building; 5 stories; lower story, concrete blocks or sawed stone; upper story, pressed brick; 25x112 ft.; composition roof; vapor heat; electric elevator; cost \$25,000. (Noted in May.)

CHURCHES

Fla., Sebring.—Methodist Church let contract to W. Crump and B. A. Cope, Sebring, to erect \$20,000 building.

Ga., Augusta.—Wharf Building.—W. H. Harrison, H. H. Cummings, E. J. Erbeling and City of Augusta let contracts to erect municipal wharf building, etc. (See Stores.)

Ga., Savannah.—Mikre Israel Congregation let contract to Jos. W. McCauley, Savannah, to repair and repaint synagogue; plans by Levy & Clarke, Savannah, call for repairing wooden tower and sash, stucco, repainting exterior; tin roof; cost about \$4000. (Lately noted.)

Ky., Harlan.—Methodist Episcopal Church let contract to F. F. Cawood, Harlan, to erect building; 45x90 ft.; brick and stone; metal roof; concrete and pine floors; steam heat; electric lights and elevators; cost \$20,000; L. H. Wilson, Archt., Newport, Ky. (Previously noted.)

Md., Brooklyn.—Brown Memorial Presbyterian Church, Park and Lafayette Aves., let contract to Harry S. Shealey, 2310 Orleans St., Baltimore, to erect addition to neighborhood house; 18x33 ft.; for dispensary, waiting-room, shower baths, etc.; brick; slag roof; concrete floors; electric lights; cost \$1500 without mechanical equipment; hot-water heat, \$948; let contract for plumbing at \$650 to Geo. W. Walther & Co., 208 W. Fayette St., Baltimore; total cost about \$3500; construction under supervision Social Service Com. of Men's Assn., Alex. Hardcastle, Jr., Chrmn. Com. (Lately noted.)

N. C., Laurinburg.—Methodist Church let contract to W. D. Tucker, Laurinburg, to erect building; cost about \$33,000.

N. C., Scotland Neck.—First Baptist Church let contract at \$27,386 (with modification) to J. W. Stout & Co., Sanford, N. C., to erect building; at \$1550 to General Fire Extinguisher Co., Charlotte, N. C., for steam heating; tile roof; terra-cotta trimmings; total cost \$35,000; C. Gadsden Sayre, Archt., Anderson, S. C.; Rev. R. A. McFarland, Pastor. (Lately noted.)

N. C., Winston-Salem.—Grace Methodist Church let contract at \$10,495 to D. K. Cecil, Lexington, N. C., to erect building; plans by Northrup & O'Brien call for concrete basement; first story walls, red brick; upper walls, stucco panels; slate roof; gray marble entrance; 12 or more Sunday-school rooms, separated by sliding doors; pastor's study, ladies' parlor, etc.; seating capacity 800; cost \$12,000; steam heat, \$1000; lighting not decided. Address R. E. Carter, Highland Ave., Winston-Salem. (Lately noted.)

CITY AND COUNTY

Md., Hagerstown.—Mansion-house.—City let contract at \$4752 to W. L. Middlekauff, Hagerstown, to remodel mansion-house in City Park.

Miss., Clarksdale.—City Hall.—City let contract to R. H. Byrd, 606 Chamber of Commerce Bldg., Birmingham, to erect lately noted city hall; 2 stories; 60x100 ft.; reinforced concrete; steam heat; tar and gravel roof; cost \$40,000; Chas. O. Pfeil, Archt., Memphis, Tenn. (See Machinery Wanted—Building Materials; Terra-Cotta; Bedford Stone; Lime and Cement; Reinforced Steel; Ornamental Iron Work; Plumbing.)

S. C., Sumter.—Library.—City let contract to J. M. Harby, Sumter, to erect Carnegie library; plans by J. H. Johnson, Sumter, and N. G. Walker, Rock Hill, S. C., call for hollow building tile reinforced and faced with Dixie texture brick; terra-cotta trim; cost \$10,000. (Lately noted.)

Va., Covington.—Firehouse.—City let contract to A. C. and B. H. Kidd, Covington, to erect firehouse; 2 stories; brick. (Previously noted.)

Va., Hopewell.—Municipal.—M. A. Finn let contract to Harrison Construction Co., Hopewell, to erect brick municipal building.

COURTHOUSES

W. Va., Pineville.—County Court let contract to D. J. Phipps, Roanoke, Va., to erect courthouse; 83 by 120 ft.; fireproof; 2 stories; slate and asphalt roof; steam heat; gas and electric lighting; ash lift; cost \$79,000; A. F. Wysong, Archt., Princeton, W. Va. Address Contractor. (Noted in April.)

DWELLINGS

D. C., Washington.—R. Claud Wright let contract to M. H. Herriman, 1101 Vermont Ave. N. W., Washington, to erect 2-story brick residence, 1311 Floral St. N. W.; cost \$5000.

D. C., Washington.—Samuel Gatkin let contract to erect store and residence. (See Stores.)

Ga., Augusta.—Louis Kerckle let contract to H. C. Van Orner, Augusta, to erect residence; frame; cost \$5000.

Ga., Atlanta.—J. F. Fair, 56 Penn Ave., has plans by and let contract to E. A. Hartsock, 904 Fourth National Bank Bldg., Atlanta, to erect residence; 32x40 ft.; frame; composition roof; cost \$5000; hot-water heat, \$750. Address contractor. (Lately noted.)

Ga., Augusta.—W. M. Dunbar let contract to Lawrence Construction Co., Augusta, to erect 3 residences; cost \$8000.

Ga., Augusta.—H. Lawrence let contract to Lawrence Construction Co., Augusta, to erect \$3000 frame residence.

Ga., Augusta.—Wm. H. Barrett let contract to Palmer-Spivey Construction Co., Augusta, to erect residence; brick; cost \$6000.

Ky., Lexington.—Davis & Wilkerson will erect 2 bungalows; let contract for lumber to S. F. McCormick Lumber Co., Lexington.

Ky., Lexington.—Henry Scott will erect bungalow; let contract for lumber and mill work to S. F. McCormick Lumber Co., Lexington.

Ky., Lexington.—S. B. Combs let contract to S. F. McCormick Lumber Co., Lexington, to erect brick bungalow.

Ky., Lexington.—Mrs. Margaret Marquis will erect frame bungalow; let contract for lumber and millwork to S. F. McCormick Lumber Co., Lexington.

Ky., Paducah.—C. P. Kipping let contract to Geo. Ingram, Paducah, to erect resi-

dence; 28x48 ft.; brick and hollow tile; composition shingle roof; wood floors; hot-water heat; cost \$7400; D. Garry Jamieson, Archt., Paducah. (Lately noted.)

La., New Orleans.—E. V. Stier, 604 Canal St., let contract to J. A. Haase, 824 Gravier St., New Orleans, to erect residence at Olympia St. near Canal St.; frame; paved basement; slate roof; wood floors; cost \$4200; W. C. Keenan, Archt., 824 Gravier St., New Orleans. (Provident Building and Loan Assn. lately noted to erect this residence.)

La., Shreveport.—Steele Home Construction Co. let contract to W. O. Spencer, Shreveport, to erect 8-room residence in South Highland Addition; Roberts Lumber & Grain Co., Shreveport, contractor for lumber.

Md., Catonsville.—Wm. B. Harris let contract to J. Henry Smith, 1426 Light St., Baltimore, to erect addition to residence at Ten Hills.

Mo., Kansas City.—L. M. Rowland, 1709 E. 9th St., has contract to erect residence at 56th and State St.; 42x66 ft.; brick; shingle roof; concrete and wood floors; hot-water heat; electric lights; cost \$25,000; Shepard, Farrar & Wiser, Architects, Kansas City. (Lately noted.)

Mo., St. Louis.—Josephine Sanguinet let contract to General Construction Co., St. Louis, to erect 2-story brick residence; cost \$6000.

N. C., Charlotte.—S. L. Vaughn has contract to erect residence on Providence Pl.

N. C., Charlotte.—W. H. Webster let contract to W. J. Hyndman, Charlotte, to erect residence in Myers Park; frame and brick veneer; green-shingle tile roof; hot-water heat; cost \$12,000; L. L. Hunter, Archt., Charlotte.

N. C., Greensboro.—Guilford Insurance & Realty Co., Arthur K. Moore, Mgr., let contract to J. R. Trullitt, Greensboro, to erect 6 residences on Olive and Hendrix Sts.; frame construction; cost \$20,000.

N. C., Lexington.—Erlanger Cotton Mills let contract to Fisk-Carter Construction Co., Greenville, S. C., to erect 80 bungalows; 14-room frame hotel; brick school and addition to Y. M. C. A. building; plans by J. E. Strine, Greenville, S. C. (Lately noted.)

N. C., Winston-Salem.—Mrs. Lillian La Grand let contract to G. E. Miller to erect residence 8 rooms; frame; cost \$3500.

N. C., Winston-Salem.—Mrs. Lillian Le Grand let contract to G. E. Miller, Winston-Salem, to erect residence; 39x55 ft.; frame; wood-shingle roof; electric lights; cost \$3500; Humphreys & Fay, Architects, Winston-Salem. (Lately noted.)

N. C., Winston-Salem.—Mrs. Lillian Le Grand let contract to G. E. Miller, Winston-Salem, to erect \$3500 residence.

Okla., Shawnee.—A. J. Fluke let contract to W. P. Carr, 208 W. Union St., Shawnee, to erect residence; 44x52 ft.; brick veneer; white stone trimmings; shingle roof; hardwood floors on wood joists; cost \$6500; A. C. Davis, Archt., Shawnee; construction begun. (Lately noted.)

Okla., Tulsa.—Mrs. Mary L. Lewis, 215 W. 9th St., has plans by and let contract to B. M. Dugger to erect residence; 28 by 36 ft.; frame; shingle roof; wood floors; electric and natural-gas lighting; cost \$2600. (Lately noted.)

Tenn., Brownsville.—J. D. Anthony has plans by and let contract to Chas. H. Sims, 335 S. Main St., Memphis, to erect residence; 20x30 ft.; stucco; asphalt-shingle roofing; hardwood floors; cost \$5500; hot-air heat, \$250; concrete sidewalks, \$200.

Tenn., Memphis.—Mrs. Edna Towner let contract to J. M. Harris, Memphis, to erect residence; 16 rooms; brick veneer; cost \$10,000.

Tenn., Memphis.—Harry Horn of Horn Bros. let contract to A. Eberhardt, Memphis, to erect residence; site 100x200 ft.; cost \$25,000.

Tenn., Memphis.—F. W. Faxon & Co. let contract to W. F. Gordon, Memphis, to erect bungalow; 1358 Faxon Ave.; stucco and stone; 6 rooms; cost \$3000.

Tenn., Nashville.—Foster Hume let contract to W. M. Davis, Nashville, to erect residence and to Demerich & Shea, Nashville, for plumbing and heating.

Tenn., Nashville.—Chas. Preston, 1302 10th Ave., has plans by and let contract to W. G. Smith, Nashville, to erect residence; 7 rooms and basement; matt brick; composition shingle roof; oak floors; cost \$4500. Address Contractor. (Lately noted.)

Tex., Dallas.—K. V. Lipscomb let contract to W. E. Arnold, Dallas, to erect residence; 6 rooms; interlocking tile; Johns-Manville

transite shingle roof; double wood floors; cement sidewalks; all contracts let. (Lately noted.)

Tex., Dallas.—O. D. Wannamaker of Southern Methodist University let contract to erect \$4000 residence.

Tex., Dallas.—K. K. Spooner let contract to Cobb & Crawford, Busch Bldg., Dallas, to erect residence; 2 stories; tile; plastered exterior and interior; clay-tile roof; hardwood floors; cost \$12,000; Brickley & Brickley, Architects., Busch Bldg., Dallas.

Tex., Fort Worth.—Mrs. I. N. Melton has plans by L. B. Weisman, 711 Main St., and let contract to B. C. Webb, care of Cameron Lumber Co., both of Fort Worth, to erect residence; 36x58 ft.; frame; shingle roof; wood floors; cost \$4000. (Lately noted.)

Tex., Gilmer.—C. A. Dyke let contract to erect residence.

Tex., Houston.—D. Edward Greer, Beaumont, let contract to Russell Brown Co., Houston and Dallas, to erect residence in Rossmore Addition; hollow-tile construction; tile roof, etc.

Tex., Lampasas.—J. H. Cauthen let contract to Tom Loney, Lampasas to erect residence lately noted; 52x68 ft.; interlocking tile and stucco; metal Spanish tile roof; marbleoid and hardwood flooring; Hess heating plant; electric lights; cost \$6000. Address owner. (See Machinery Wanted—Heating Plant; Plumbing; Electric-light Fixtures; Hot-water Apparatus.)

Va., Danville.—N. Klaff let contract to W. King Anderson, to erect 4 dwellings; 22x60 ft.; brick; concrete porches; cost \$825; Heard & Cardwell, Architects., Danville and Lynchburg, Va.

Va., Norfolk.—E. S. Parker & Co. let contract to L. McCloud, Norfolk, to erect 3 residences; 2 stories; brick; cost \$14,400.

Va., Norfolk.—Merdaunt Etheridge let contract to L. McCloud, Norfolk, to erect residence; 2 stories; brick; cost \$6000.

Va., Norfolk.—Mary C. McCuen let contract to John Kilbough, Norfolk, to erect 2-story frame residence; cost \$3300.

Va., Norfolk.—W. S. Andrews let contract to L. McCloud, Norfolk, to erect 2-story brick residence; cost \$4250.

Va., Staunton.—T. H. Russell let contract to M. B. Stoddard, Staunton, to erect \$12,000 residence.

W. Va., Huntington.—J. S. Thurmond let contract to C. S. Brown, Huntington, for pressed brick for \$40,000 residence.

GOVERNMENT AND STATE

Okl., Fort Sill.—Officers' Quarters.—Government let contract to Fred B. Hann, Lawton, Okla., to erect \$12,000 non-commissioned officers' quarters.

HOSPITALS, SANITARIUMS, ETC.

Md., Catonsville.—Helen Russell, 16 Fustling Ave., let contract to Reich & Leimbach, Catonsville, to erect 21-room addition to Russell's Sanatorium.

S. C., Aiken.—Aiken Hospital is reported to have let contract to McGhee & McGhee, Aiken, to erect hospital building.

Va., Lynchburg.—Lynchburg Hospital Trustees let contract to Hamilton Bros., Lynch Bldg., Lynchburg, to repair and improve hospital; McLaughlin & Johnson, Architects., Lynchburg. Address Contrs. (Lately noted.)

W. Va., Glendale.—Rev. B. M. Spurr let contract to W. H. Batson, Moundsville, W. Va., to erect nurses' home; 116x43 ft.; hollow tile and stucco; tile roof; wood floors; steam heat; electric lights from present plant; cost \$23,000. Address contractor.

W. Va., McKendree.—State Board of Control, J. S. Lakin, Prest., Charleston, W. Va., let contract to erect nurses' home at Miners' Hospital No. 3; cost \$16,000.

HOTELS

N. C., Lexington.—Erlanger Cotton Mills let contract to erect hotel. (See Dwellings.)

Tex., Snyder.—Geo. W. Harris let contract to erect store and hotel building. (See Stores.)

MISCELLANEOUS

Ala., Spring Hill.—Clubhouse.—Mobile Country Club let contract to E. J. Raub & Co., Mobile, to erect clubhouse; 3 stories; 20,000 sq. ft. floor space; frame and concrete; shingle roof; wood and tile floors; cost \$28,000; lighting plant, \$2000; Geo. B. Rogers, Archt., Mobile. Address contractors. (Lately noted.)

Ky., Lexington.—Restaurant.—Geo. K. Graves let contract to S. F. McCormick,

Lexington, to remodel building to be occupied by Martin & Stockwell's restaurant.

SCHOOLS

Fla., Bonifay.—School Board let contract to S. F. Fulghum & Co., Pensacola, to erect school building; 80x135 ft.; 2 stories; brick and frame; cost \$16,000; steam heat, \$1000; S. J. Welch, Archt., Pensacola, Fla. Address contractors. (Lately noted.)

Fla., Bowling Green.—Board of Public Instruction let contract to W. C. Robertson & Co., Fort Mead, Fla., to erect school; brick; composition roof; Francis J. Kennard, Architect, Tampa. (Previously noted.)

Fla., DeFuniak Springs.—Walton County School Board let contract to H. H. Brown, Dothan, Ala., to erect school; 80x140 ft.; 2 stories; brick and frame; asbestos roof; cost \$22,000; S. J. Welch, Archt., Pensacola, Fla. Address contractor.

Fla., Lake Worth.—School Board let contract at \$3883 to K. L. Hifner to erect school building; plans by Harry Benson, Boynton, Fla.; W. H. Smith and F. H. Erimle, Stuart, Fla.

Fla., New Smyrna.—Board of Public Instruction, Volusia County, let contract to Florida Schub Concrete Construction Co., Jacksonville, to erect school; about 76x168 ft., with projection of auditorium about 50x80 ft.; reinforced concrete walls; ordinary construction above first floor, which is concrete on fill; Barrett specification roof on main structure, asbestos asphalt roof on auditorium; concrete floors in basement, first-floor corridors, etc.; wood floors in classrooms and auditorium; probably steam heat; city electric lights; cost \$36,176; construction begins about July 1; A. E. Lewis, Archt., Miami. Address Contr. (Lately noted.)

Fla., Santa Rosa.—Trustees let contract to H. H. Brown, Dothan, Ala., to erect school; 2 stories; 70x70 ft.; frame; tar and gravel roof; steam heat to cost \$2600; S. J. Welch, Archt., Pensacola, Fla. Address contractor.

Ga., Tallapoosa.—City has plans by Morris & Morris, Atlanta, National Bank Bldg., Atlanta, and let contract to Edwards & Martin, Piedmont, Ala., to erect school building; 57x167 ft.; brick; 12 classrooms and auditorium; seating capacity 700; steam-blast heating system; completion by Sept. 10. (Lately noted.)

Fla., Zolfo.—Board of Public Instruction let contract at \$6000 to W. C. Robertson & Co., Fort Meade, Fla., to erect brick school building; Wm. Bradford, Archt., Arcadia, Fla. (Lately noted.)

Ga., Macon.—Board of Education let contract to H. A. Bankston, Macon, to erect lately noted school in Price Consolidated School Dist.; 1 story; brick; 6 rooms; accommodate 250 pupils; plans by Curran R. Ellis, Macon; other schools in progress and contemplation include repairs to Clisby and South Macon schools, sanitary connections in Newberg and Gresham schools; rejected all bids for Vineville school and will call for new bids

Ky., Versailles.—Margaret College directors let contract to John Rump, Versailles, to erect school and gymnasium building; about 60x90 ft.; brick; slate roof; wood floors; steam heat; electric and gas lights; cost \$20,000; Arthur Glamm, Archt., Lexington, Ky. (Lately noted.)

Miss., Jackson.—State let contract to R. E. Russell, Jackson, to erect building for State Blind Institute; 60x80 ft.; concrete and wood; tile and composition roof; reinforced concrete and wood floors; cost \$14,000; steam heat, \$2000; N. W. Overstreet, Archt., Jackson. (Lately noted.)

N. C., Lexington.—Erlanger Cotton Mills let contract to erect school. (See Dwellings.)

Okl., Council Hill.—School Board let contract to Manhattan Construction Co., Muskogee, Okla., to erect school; 3 stories; brick; gravel roof; joist floor construction; cost \$30,000; also let contract for heating to O'Connor Company, Muskogee. (Lately noted.)

Okl., Mulhall.—School Board let contract to Fielding & Gross, Guthrie, Okla., to erect school; 2 stories and basement; 46x75 ft.; cost \$12,000. (Lately noted.)

Okl., Tatum.—Dist. School Board let contract to H. B. Ramsey, Davis, Okla., to erect school; 36x42 ft.; concrete blocks, 8x16 in.; rubberoid roofing; wood floors. Address contractor.

S. C., Spartanburg.—Arkwright School Dist. let contract to L. A. Justice, Spartanburg, to erect school; brick veneer; wood shingle roof; wood floors; concrete trim; 2 stories; 4 classrooms, auditorium, domestic science and reading rooms; electric light; steam heat; 50x80 ft.; cost \$8000; R. E. Lee,

Archt., Clemson College, S. C.; completion by Nov. 1. (Lately noted.)

Tenn., Benton.—Polk County let contract at \$13,586 to T. O. Cardwell, Lenoir City, Tenn., to erect school; 56x90 ft.; 7 grade classrooms, auditorium, 7-room basement; steam heat; electric lights; water system; brick walls; wood joists; tar and gravel roof; wood floors; W. H. Sears, Archt., Chattanooga. (Noted in May.)

Tenn., Nashville.—Buford College for Women, Mrs. E. G. Buford, Prest., let contract to Foster-Creighton Co., Nashville, to erect addition to building; cost about \$50,000; plans by Marr & Holman, Nashville. (Lately noted.)

Tex., Arden.—Trustees let contract to Sullivan & Oats, Comanche, Tex., to erect \$10,000 brick school.

Tex., Corsicana.—School Board let contract at \$4329.35 to J. E. Metcalf, Box 122, Corsicana, to erect 2-room addition to Fred Douglas School; brick, stone and wood construction; asbestos roof; wood floors; completion by Sept. 1.

Tex., Guadalupe.—School Board let contract to Chas. Fuess & Son, Cuero, Tex., to erect school; 2 stories; 55.4x43.8 ft.; interlocking tile and brick veneer; Barrett tar and gravel roof; wood floors; stoves; Jul. Loffland & Son, Architects., Victoria, Tex. (Lately noted.)

Tex., Hockley.—Trustees let contract at \$5183 to Berry & Brunson to erect 3-room brick school; F. S. Glover & Son, Architects., Houston. (Lately noted.)

Tex., Leroy.—Trustees let contract to W. F. Fell, Waco, to erect school; 34x98 ft.; ordinary brick; tar and gravel roof; wood floors; cost \$6350; heating \$300; Edw. H. Reed, Archt., 1903 Amicable Bldg., Waco.

Tex., Plainview.—Trustees let contract to J. B. Maxey, Plainview, to erect high-school building; plans by M. L. Waller, Fort Worth, call for 3 stories; brick and reinforced concrete; cost \$50,000 to \$55,000. (Lately noted.)

Tex., San Antonio.—Board of Education let contract at \$53,984 to Wright & Sanders, San Antonio, to erect East Side School; at \$5940 to West & Gutzell, San Antonio, for plumbing and heating; \$496 to Martin Wright, San Antonio, for wiring. (Lately noted.)

Va., Chase City.—School Board has plans by and let contract to John Reynolds to erect school; 32x64 ft.; brick; slate roof; wood floors; cost \$6000; direct indirect steam heat, \$1000 (contract to be let now). (Noted in May.)

W. Va., Romney.—J. Sloan Kuykendall, Prest., School Board, let contract to erect addition to school; also let contract to Macfarlane Plumbing & Heating Co., Romney, for plumbing; Columbus (Ohio) Heating & Ventilating Co. has contract for heating and ventilating; Holmboe & Lafferty, Architects., Clarksburg, W. Va. (Lately noted.)

STORES

Ala., Attalla.—Geo. P. Walker has plans by and let contract to Jas. A. Weaver, Collinsville, Ala., to remodel 2 store buildings lately noted; brick; one store cement flooring, one tiling; hot-water heat; electric lights. (See Machinery Wanted—Heating Plant; Brick; Tile.)

Ala., Birmingham.—Macke Investment Co. let contract to M. C. Banks, 105 Wood St., Birmingham, to erect store building on First Ave.; 4 stories; brick and concrete; 50x130 ft.; steam heat; electric lights; sprinkler system; 3 electric elevators; cost \$28,000; construction begun; J. T. Moore, Archt., Birmingham. (Lately noted.)

D. C., Washington.—Samuel Gatkin has plans by Israel Diamond, 539 Irving St. N. W., Washington, and let contract to J. Diamond to erect 2-story brick store and residence; cost \$4300.

Fla., Miami.—A. H. Adams, 2d St. and Ave. D, let contract to John C. Williams, 104

Ave. B, Miami, to erect store and apartment building; 50x90 ft.; 2 stories and basement; reinforced concrete walls, balance frame construction; asbestos roof; yellow pine floors; city electric lights; cost \$12,000; also erecting 5 small residences and remodeling 3 other dwellings. Address owner. (Lately noted.)

Ga., Augusta.—W. H. Harrison, H. H. Cumming, E. J. Erbeling and City of Augusta let contracts to E. J. Erbeling Co., Augusta, to erect warehouses 70x74 ft., 40x50 ft., 30x45 ft.; garage 34x160 ft.; 3 stores 27x120 ft., and 1 store 190x27 ft.; municipal wharf building; brick; tin roofs; cement floors in warehouses, wood floors in other structures; electric lights; cement sidewalks; cost \$42,000; all materials purchased. (Lately noted in part.)

Ga., Atlanta.—E. H. Inman let contract to R. M. Walker, Atlanta, to repair building at 51 Peachtree St.; cost \$3400.

Miss., Greenville.—F. W. Woolworth & Co., New York, let contract to Jake Strickland Lumber Co., Greenville, to remodel Hafter Bldg.; tile and plate-glass front; concrete floors with wood covering; metal ceiling; elevator; completion by July 1; cost several thousand dollars. (Lately noted.)

Mo., Kennett.—W. G. Petty let contract to W. W. Taylor & Sons, Cape Girardeau, Mo., to erect store building; 30x50x30x60 ft.; semi-fireproof; concrete floor; white enamel brick front; cost about \$8000.

Tenn., Chattanooga.—Volunteer State Life Insurance Co. let contract to erect store and office building. (See Bank and Office.)

Tex., Beaumont.—J. F. Keith let contract to James Wellman, Beaumont, to enlarge and remodel building for White House Dry Goods Co., 620-26 Pearl St.; addition 40x100 ft.; install arcade front, steel ceiling, etc.; Babin & Beck, Architects., Beaumont. (Lately noted.)

Tex., Snyder.—Geo. W. Harris let contract to erect building; 2 stories; brick; lower floor for stores; upper floor annex to hotel.

Va., Covington.—E. M. Nettleton let contract to J. A. Allen, Covington, to erect additional story to building on Maple Ave.; will install elevator.

Va., Lexington.—Mrs. W. C. Stuart let contract to John C. Loyal and John A. Champ, Lexington, to improve stores on Main St. as follows: New fronts; storerooms enlarged, etc.; cost \$15,000; work begins July 1.

WAREHOUSES

D. C., Washington.—W. S. Hoge & Bro. let contract to Michael Weller to erect warehouse; 50x140 ft.; concrete construction; concrete floors; cost \$7000.

Ga., Augusta.—W. H. Harrison, H. H. Cummings, E. J. Erbeling and City of Augusta let contracts to erect several warehouses, etc. (See Stores.)

Ga., Tifton.—B. Y. Wallace let contract to V. C. Parker & Son, Waycross, to erect warehouse; 75x235 ft.; 1 story; fireproof; concrete, brick and steel; tar and gravel roof; concrete and maple flooring; conduit wiring; electric warehouse lift; cost \$25,000; Edwards & Sayward, Architects., Atlanta. (Lately noted.)

N. C., Ahoskie.—Planters' Warehouse let contract at \$7300 to D. L. Thomas, Ahoskie, to erect warehouse; brick; 150x100 ft.

N. C., Durham.—Durham Hosiery Mill Co., J. S. Carr, Jr., Prest., let contract to N. Underwood, Durham, to erect warehouse; 4 stories and basement; capacity 5000 to 6000 bales cotton; cost \$28,300; completion by Oct. 15.

S. C., Laurens.—Laurens Bonded Warehouse Co., N. B. Dial, Prest., will erect building; contract let.

N. C., Winston-Salem.—R. J. Reynolds Tobacco Co. let contract to Travers Wood Co., Richmond, Va., to erect fireproof storage building at Sycamore and 5th Sts.; 5 stories; 133x242 ft.; completion by Dec. 31; cost \$125,000; J. E. Sirmine, Archt., Greenville, S. C. (Previously noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Air Compressor, etc.—Standard Talc Co., Chatsworth, Ga.—Second-hand compressed air drill, drum, compressor and engine.

Air Compressor.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Lowest dealers' prices on fur Kid aid drill or jack hammer drill.

Air Compressor.—W. G. Robinson, 1900

14th Ave., South, Birmingham, Ala.—Air compressor; 700 to 800 cu. ft. per minute; second hand.

Agricultural Machinery.—Ferdinando Bigotti, Turin, Italy.—Data and prices on agricultural machinery; view to representation.

Bags.—See Sacking Machinery, etc.—Stone Products Co.

Belting and Pulleys.—"Drugs," care Manufacturers Record, Baltimore, Md.—Limited amount second-hand belting, good order, various widths, single or double ply; also 2 clutch pulleys, 1 15-16-in.; state price.

Boat Basin.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C.—Bids until July 10 for boat basin at U. S. Quarantine Station, Galveston, Tex., in accordance with drawing No. 16-A; copies of specifications obtainable on application to custodian of station, Galveston, or Archt.'s office.

Boiler.—See Bottle-filling Machinery, etc. Florida Fruit Products Co.

Boilers.—C. C. Penny, 1923 Powell Ave., Birmingham, Ala.—Two 72-in. by 18-ft. H. T. boilers; 125 lbs. steam pressure; second-hand.

Boilers.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Lowest jobbers' prices on 200 to 250 H. P. return tubular boilers, singular boiler preferred; delivered at Macon, Ga.; first-class running order; boiler insurance inspection; delivery not later than 30 to 60 days.

Bedford Stone.—See Building Materials. R. H. Byrd & Co.

Bell and Tower.—Water and Light Com., B. D. Cantley, Chrmn., Blackshear, Ga.—Fire alarm tower and bell.

Bottle-filling Machinery, etc.—Florida Fruit Products Co., Claude E. Street, Mgr., Haines City, Fla.—Prices on 90 to 100 H. P. boiler; about 5000 gals. in 1000-gal. size enamel-lined metal tanks; copper or block tin pipe and fittings; automatic bottle-filling machine; crown capping machine; refrigerating machine; pasteurizer and labeling machines.

Brick.—Geo. P. Walker, Attalla, Ala.—Prices on uniform press brick, red, gray, etc.

Brick Machines, etc.—Jas. A. Drake, Bennettsville, S. C.—Data on manufacture of brick of cement and sand, and of cement and granite screenings, with prices on machinery; also prices on cement roofing machinery.

Bridge Construction.—Knox County Good Roads Com., Knoxville, Tenn.—Bids until July 5 to construct concrete bridge over Roseberry Creek.

Bridge Construction.—Tyler County Court, Middlebourne, W. Va.—Bids until July 10 to construct reinforced concrete arch bridge across Middle Island Creek; plans and specifications at above office, or office of State Road Bureau, A. D. Williams, Ch. Road Engr., Library Bldg., Morgantown, W. Va.

Bridge Construction.—Hanover County Supvrs., C. S. Luck, Chrmn., Hanover, Va.—Bids until July 1 to construct reinforced concrete bridge over South Anna River near Ashland, Va.; plans obtainable from Childrey Co.; Savill & Claiborne, Consult. Engrs., Richmond, Va.

Bridge Construction.—Carroll County Commrs., Hillsville, Va.—Bids at office County Clerk until July 8 to construct steel bridge 81 ft. long over Snake Creek and 1220 cu. yds. approach fills; plans and specifications on file at Clerk's office, Hillsville, and office of State Highway Commission, G. P. Coleman, State Highway Commr., Richmond, Va.

Bridge Construction.—Caroline County Commrs., Bowling Green, Va.—Bids until June 29 to construct reinforced concrete bridge 93 ft. long over Pole Cat Creek, and for 2600 cu. yds. approach fills; plans and specifications on file at Clerk's office, Bowling Green, and at office State Highway Commission, G. P. Coleman, State Highway Commr., Richmond, Va.

Button Machinery.—A. Wilson, 7809 Commercial St., New Orleans, La.—Correspondence with manufacturers of pearl button machinery.

Building Materials.—W. S. Plager, 2115 Kearney St. N. E., Washington, D. C.—Prices on building materials for 2 dwellings to cost \$5000.

Building Materials.—Duval County Commrs., Jacksonville, Fla.—Bids until June 30 to furnish lumber and other materials for erecting convet stockade on county farm at Hogan, Fla.; list of such materials on application office Frank Brown, Clerk, Room 2 Courthouse Bldg., Jacksonville.

Building Materials.—R. H. Byrd & Co., 606 Chamber of Commerce Bldg., Birmingham, Ala.—Prices on terra-cotta, sand and gravel, Bedford stone, lime and cement, reinforced steel, ornamental iron work, plumbing, plastering and millwork for \$40,000 city hall at Clarksdale, Miss.

Cars (Mine).—Standard Tale Co., Chatsworth, Ga.—Three second-hand mine cars.

Coke.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 150 tons No. 2 grade coke, Sch. 5794, delivery Charleston.

Concrete Reinforcement, Cement, etc.—Stevens Bros. & Co., Milledgeville, Ga.—Prices on shafting, concrete reinforcement, cement, roofing, iron pipe, etc.

Cotton Machinery.—E. C. Johnson, North, S. C.—Data and prices on machinery to spin cotton yarn.

Creamery Equipment, etc.—R. W. Shriner, Daphne, Ala.—Catalogues and prices on 30 H. P. oil engine, 10-ton ice plant and various creamery appliances.

Crusher.—W. G. Robinson, 1900 14th Ave., South Birmingham, Ala.—No. 7½ gyrator crusher; second hand.

Crusher.—Wise Granite & Construction Co., Richmond Va.—Prices on jaw crusher for granite; 100 tons daily.

Drainage Construction.—Pioneer Drainage Dist. of Henry County, H. A. Stewart, Secy., Board of Supvrs., Urich, Mo. Bids at Bank of Urich on July 11 to construct main ditch, relief ditch, and 3 lateral ditches as follows: Main ditch, length 9 mi., earth excavation 528,000 cu. yds., 33 acres clearing; Knob Creek lateral No. 1, length 3500 ft., 18,400 cu. yds. excavation; Knob Creek lateral No. 2, length 2154 ft., 8600 cu. yds. excavation; White Oak lateral, length 4904 ft., 21,500 cu. yds. excavation; relief ditch, length 630 ft., 2900 cu. yds. excavation; proposal sheets furnished on request; plans, specifications, etc., on file office of Circuit Court at Clinton, Mo.; with Engrs., and at Bank of Urich, and sets are obtainable for \$5 on application to Brooks & Jacoby, Engrs., 513 Shukert Bldg., Kansas City, Mo.

Drug Equipment.—E. H. Cummins, 4th and Oak Sts., Quincy, Ill.—Second-hand equipment as follows: Jacketed iron kettle with steam coil and stirrer; refuld condensers; filter presses; vacuum dryers; acid storage tanks; caustic fusion; auto claves.

Dryers.—See Drug Equipment.—E. H. Cummins.

Drying Equipment.—Chas. L. Reeder, Park Ave. and Saratoga St., Baltimore, Md.—Data and prices on dryer or evaporator for apples, peaches, etc.; equipment to treat ripe fruit, probably 6 bushels at once, and thoroughly dry by hot air or steam.

Electric-light Construction.—See Water-works and Electric Plant Construction.—City of Baldwin, Miss.

Electric-light Fixtures.—J. H. Caution, Lampasas, Tex.—Prices on electric-light fixtures for \$6000 residence.

Electric Light Plant.—City of Goodman, Miss., A. N. Roberts, Clerk.—Bids until July 6 to construct electric lighting system; includes furnishing oil engine, generator, switchboard, transformers, electric line and street lighting system; proposals also invited on D. C. installation, consisting of engine, generator, switchboard, storage battery, electric line and street lighting system; specifications, plans, etc. may be seen at office of W. E. Weeks, Mayor, or will be mailed on application to Xavier A. Kramer, Const. Engr., Magnolia, Miss.

Electrical Equipment.—Port Commrs., J. C. O'Dell, Gen. Mgr., 405 Realty Bldg., Jacksonville, Fla.—Bids until July 1 for electrical equipment and construction at municipal docks and terminals, Talleyrand Ave., as follows: Item No. 1, six circuit charging panels with rheostats for charging truck batteries; motor generator panel with instruments; distribution panel; 25 K. W. motor generator set; Item No. 2 includes erecting above equipment and furnishing all other material, etc., to construct electric-lighting system at battery charging equipment; plans by Mr. O'Dell.

Electric Motors.—See Machine Tools, etc.—Detroit Gas Turbine Corp.

Electric Plant Equipment.—City of Dunn, N. C., J. W. Turnage, Mayor.—Prices on boiler and engine, with direct exciter.

Electrical Machinery.—Troy Cross Arm Co., Troy, N. C.—Transformers, 50 to 100 K. W., voltage 1100 to 2300, 3-phase, 60-cycle.

Electrical Products.—Ferdinando Bigotti, Turin, Italy.—Data and prices on electrical products; view to representation.

Elevator.—Oscar High, Whiteville, N. C.—Prices on freight elevator for \$5000 mercantile building.

Engine (Oil).—R. W. Shriner, Daphne, Ala.—Prices on 30 H. P. oil engine. (See Creamery Equipment, etc.)

Engine (Gasoline).—Diamond Hill Independent School, J. W. Richardson, Secy., Fort Worth, Tex.—Prices on 4 H. P. gasoline engine.

Engine.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—125 to 150 H. P. engine; Corliss preferred; delivery, Macon, Ga.; delivery not later than 30 to 60 days.

Engine and Boiler.—See Electric Plant Equipment.—City of Dunn.

Excelsior.—Ford Motor Co., Purchasing Dept., Atlanta, Ga.—Names and addresses of manufacturers of excelsior for packing purposes; near Atlanta, so freight rates will be satisfactory.

Filling Equipment.—Blount Lumber Co., Trafford, Ala.—Filling-room equipment for horizontal band resaw.

Filter Presses.—See Drug Equipment.—E. H. Cummins.

Hardware.—See Machine Tools, etc.—Detroit Gas Turbine Corp.

Hardware, Metals, etc.—Panama Canal, Earl I. Brown, General Purchasing Officer, Washington, D. C.—Bids until July 7 to furnish stay-bolt, galvanized steel or iron, drill-steel rods, steel cable, wire netting, wire, nails, track spikes, boat spikes, bolts, rivets, tubing, sheet brass, sheet copper, bronze, toe calks, cable clips, ferrules, grommets, brass washers, valves, cocks, pulleys, pipe-threading machine, crucibles, riddles, anchors, electrical attachments, turpentine substitute, benzine, etc.; blanks and general information (circular 1055) obtainable from this office or offices of assistant purchasing agent, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Heater (Feed-water).—Algiers Distilling Co., Algiers, La.—Data and prices on 900 H. P. feed-water heater.

Heating Plant.—Geo. P. Walker, Attalla, Ala.—Prices on hot water heating apparatus for store building.

Heating Plant.—J. H. Caution, Lampasas, Tex.—Prices on hot air furnace for \$6000 residence.

Heating Plant.—F. C. Wilkerson & Bro., 72 W. 11th St., Atlanta, Ga.—Prices on hot-air furnaces for three \$2500 residences.

Heating and Plumbing.—Duval County Board of Public Instruction, F. A. Hathaway, County Supt., 415 Masonic Temple, Jacksonville, Fla.—Bids until July 15 for heating and plumbing school building at Murray Hill, near Jacksonville; plans, proposal blanks, etc., obtainable from Mellen C. Greeley, Archt., Jacksonville.

Hot-water Apparatus.—J. H. Caution, Lampasas, Tex.—Prices on hot-water apparatus (instantaneous) for \$6000 residence.

Hulling and Grinding Machinery.—W. B. Schuman, Jr., Savannah, Ga.—To correspond with manufacturers of velvet-bean hulling and grinding machinery.

Ice Machinery.—R. W. Shriner, Daphne, Ala.—Prices on 10-ton ice plant. (See Creamery Equipment, etc.)

Ice Machinery.—T. M. Street, 913 Teche St., Algiers, La.—Data and prices on 50-ton absorption ice plant.

Knife Grinders.—Ram Dass, Glen Gerry Cottage, Dalhousie P. O., Punjab, India.—Catalogues and price lists of knife grinders.

Levee Construction.—J. A. Mulholland, Tarrant County Auditor, Fort Worth, Tex.—Bids until July 3 for levee construction, comprising new work, filling gaps, sodding, reinforcing concrete, drain gates and cleaning of channel; plans and specifications obtainable from District Engr., Courthouse, Fort Worth.

Lime and Cement.—See Building Materials.—R. H. Byrd & Co.

Lime Equipment.—W. B. Schuman, Jr., Savannah, Ga.—Data and prices on equipment for daily manufacture of 100 tons lime and 100 tons hydrated lime.

Locomotive.—John G. Duncan Co., 308 W. Jackson Ave., Knoxville, Tenn.—Lowest dealers' price on 6 or 7-ton 36-in. gauge Dinkey locomotive; second hand; state lowest freight rates to Knoxville.

Lumber.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 75 pieces 12x16-in. plank white oak; 193 pieces white pine, and 25,000 ft. flooring

yellow pine, Sch. 5792, delivery Washington; also on 2,000,000 ft. teak logs, Sch. 5790, delivery Brooklyn, Mare Island.

Lumber.—See Building Materials.—Duval County Commrs.

Machine Tools.—Ram Dass, Glen Gerry Cottage, Dalhousie P. O., Punjab, India.—Catalogues and price lists of machine tools.

Machine Tools, etc.—Detroit Gas Turbine Corp., Detroit, Mich.—Two No. 2 universal milling machines; one No. 1 universal milling machine; four 22x30-inch gap lathes; four 18-inch lathes; six 14-inch lathes; five 12-inch lathes; four bench lathes; one bath grinder; two 30-inch drill presses; four 20-inch drill presses; two arbor presses; three gang drill presses; two sensitive drill presses; three emery grinders; two automatic screw machines; two 36-inch bullard turret mills; Lucas boring mill; two 16-inch tool room lathes; tool room grinder; 36-inch band saw; two wood turning lathes; wood planer; milling cutters; end mills; drills; taps; dies; wrenches; hand tools; bench vises; files; tool steel; drill chucks; reamers; nuts; screws; bolts; washers.

Each lathe with one face plate, turning plate and one 4-jaw independent chuck, together with other necessary tools and equipment; also, four 6-inch universal and six 8-inch universal and four 10-inch universal chucks.

All machines to be supplied with suitable countershaft of latest design, together with main shafting, pulleys, belting, hangers and driving motors with complete equipment.

Machine Tools, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on electric-hoist, 5-ton jib crane, and 4-in. radial drilling machine, Sch. 5801; also core drill and accessories, Sch. 5800, delivery Charleston; sensitive drill, 2 buffing lathes, two 800-lb. single-stand hammers, 6-spindle drill press, and 21-in. upright drill press, Sch. 5807, delivery Portsmouth, N. H.; two 1200-lb. drop hammers, and 2 trimming presses for drop forgings, Sch. 5806, also pipe threading machine, Sch. 5787, delivery Brooklyn; 2,000,000-lb. chain testing machine, Sch. 5788, delivery Boston; concrete mixer, Sch. 5784, delivery Washington.

Meter Box Frames and Covers.—Bond Trustees, W. M. Bostwick, Jr., Chairman, City Hall, Jacksonville, Fla.—Bids until July 6 to furnish f. o. b. Jacksonville 500 cast-iron meter box frames and covers; plans and specifications on file with Commr. of Public Works, Engineer Bldg., Main and Orange Sts.

Oil (Cotton) Machinery.—F. G. Hollis & Co., Bennettsville, S. C.—Addresses of manufacturers of machinery used in manufacture and refining of cottonseed-oil for making compound lard.

Ornamental Iron Work.—See Building Materials.—R. H. Byrd & Co.

Paving.—Commrs. Street Improvement Dist. No. 3, J. I. Hagler, Secy., Stuttgart, Ark.—Bids at office Towl Engineering Co., Pettit Bldg., until June 26 to construct 47,800 sq. yds. pavement; concrete, bituminous or macadam pavement.

Paving.—Board of Council, J. M. Wallace, Mayor, Danville, Ky.—Bids until July 4 to construct 7000 sq. yds. asphalt paving on Main St.; alternate proposals for bituminous concrete; include curbs, guttering, storm-water sewers, catch-basins, etc.; plans and specifications prepared by S. F. Cerebus, Engr., copies of which may be obtained from Supt. of Streets or mailed to bidders for \$2.

Paving.—City of Mount Sterling, Ky.—Bids July 5 to construct paving; about 8800 sq. yds. type A asphalt, vitrified brick on concrete foundation, bitulithic or tarvia, and about 9700 lin. ft. concrete curbing and guttering; plans and specifications on file with H. M. Ringo, City Clerk, July 1.

Paving.—J. W. Taylor, Mayor and Board of Commrs., Roanoke Rapids, N. C.—Bids until June 28 to grade and lay granolithic sidewalks; 10,000 yds.; plans, profiles, specifications, etc., obtainable from Mayor or Clerk; J. T. Chase, Consult. Engr.

Paving.—Commrs. Street Improvement Dist. No. 11, E. S. Blasdel, Chrmn., Hot Springs, Ark.—Bids until June 24 to pave Valley St. from Reserve to Malvern Ave. Reserve Ave. from Valley St. to Central Ave. and Springs St. from Valley St. to Central Ave.; wood blocks or bitulithic; plans and specifications on request.

Paving.—Street Committee (Wm. F. Broderick and others), Midland, Md.—Bids until June 22 to grade and pave 1600 ft. street; plans and specifications on file with Thos. H. Taylor, City Clerk; bids to be

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made on blank forms furnished by City Engineer.

Paving.—Baltimore (Md.) Board of Awards. City Hall.—Bids until June 28 to pave additional alleys; specifications and proposal sheets furnished on application to R. M. Cooksey, Highways Engr.

Paving.—City of Center, Tex. W. I. Powell, City Secy.—Bids for construction work on 5 mi. of streets, to include grading, etc., construction of culverts, bridges, cuts and fills; about 1 mi. street and public square, to include gravel; profile of work on file with City Secy.

Paving.—City of Staunton, Va. Office of Gen. Mgr.—Bids until June 23 to resurface with asphalt binder Churchville Ave. and portion of North Augusta St.; for particulars address Gen. Mgr.

Pier Construction.—City of Sarasota, Fla. Robt. C. Bruce, Commr. of Public Works.—Bids until July 10 to construct reinforced concrete municipal and recreation pier with suitable buildings; cost not to exceed \$15,000; bidders to submit their own plans and specifications, to conform to general specifications on file with Commr. of Public Works; for further information and general specifications address Robt. C. Bruce, Commr. of Public Works.

Pipe (Iron).—See Concrete Reinforcement, Cement, etc.—Stevens Bros. & Co.

Pipe.—Bond Trustees, W. M. Bostwick, Jr., Chrmn., City Hall, Jacksonville, Fla.—Bids until July 6 to furnish following cast-iron coated water pipe: 24 ft. 20-in. Class B; 80 ft. 8-in. Class D; 1800 ft. 6-in. Class B; also 5 tons of Class B fittings: Four 8x6 tees; two 8x6 crosses; ten 6x6 tees; ten 6x6 crosses; four 8x6 reducers; two 10x8 reducers; two 12x10 reducers, and twelve 6-in. sleeves; all in accordance with standard specifications of American Water-Works Association; for further information apply to R. N. Ellis, Purchasing Agent.

Pipe (Gas).—Mullendore Gas Co., Stillwater, Okla.—11 mi. 6-in., 2 mi. 4-in., 2 mi. 3-in. and 2 mi. 2-in. gas pipe; second-hand; prompt shipments.

Piping (Water).—Champion Fibre Co., Canton, N. C.—Bids on underground system of piping for fire protection in wood yard.

Planters' Equipment.—A. K. (English manufacturer), care Manufacturers Record. To correspond with manufacturers of equipment, machinery supplies, etc., required by planters of sugar, rice, tobacco, rubber, coffee and tea.

Plate Glass.—Oscar High, Whiteville, N. C.—Prices on plate glass for \$5000 mercantile building.

Plumbing.—See Building Materials.—R. H. Byrd & Co.

Plumbing.—J. H. Cauthen, Lampasas, Tex.—Prices on bathroom fixtures and plumbing for \$6000 residence.

Pneumatic Hammers.—Ing. E. Macchi, 35 Mario Pagano, Milan, Italy.—Pneumatic hammers; cables Manufacturers Record: "Needing pneumatic hammers for rivets $\frac{3}{4}$ and 1 in.; cable promptly who can supply immediately."

Pulleys.—See Belting and Pulleys.—"Drugs," care Manufacturers Record.

Pump Jack.—Diamond Hill Independent School, J. W. Richardson, Secy., Fort Worth, Tex.—Prices on pump jack.

Pumping Machinery.—Fowler Bros. Land Co., Fowler, Tex.—To correspond with manufacturers of endless chain bucket pumps driven by power machinery.

Rails.—Standard Tale Co., Chatsworth, Ga.—Iron rails; 500 ft.; for mine cars.

Rails.—Keynolds Bros. Lumber Co., Franklin, N. C.—4 mi. 35 or 40-lb. relay steel rails; 4 mi. 56-lb. relay steel, with angle bars; quote delivery Albany, Ga.

Refrigerating Machinery.—See Bottle-filling Machinery, etc.—Florida Fruit Products Co.

Reinforced Steel.—See Building Materials.—R. H. Byrd & Co.

Road Construction.—Whitley County Roads Commission, H. F. Davis, County Road Engr., Williamsburg, Ky.—Bids June 26 on 15-18 mi. limestone water-bound macadam.

Road Construction.—Montgomery County Commrs., Berry E. Clark, Clerk, Rockville, Md.—Bids until July 11 to construct Muncasters Mill Rd., about 5 mi., along county road between Norbeck and near Redland; plans and specifications obtainable for \$1 at office Commrs.

Road Construction.—Scott County Commrs., Gate City, Va.—Bids until July 1 to macadamize 9 mi. of road between Speers

Ferry and Gate City and 5.3 mi. between Moccasin Gap and Yuma Postoffice; road already graded; also for grading 5 mi. of road between Yuma Postoffice and Kermit; plans and specifications on file at Clerk's office, Gate City, and at office of State Highway Commission, G. P. Coleman, State Highway Commr., Richmond, Va.

Road Construction.—B. M. McCully, Chancery Clerk, Winston County, Louisville, Miss.—Bids until July 3 for road improvements in 3 districts; specifications on file with Chancery Clerk and at office of Xavier A. Kramer, Engr., Magnolia, Miss.

Road Construction.—Henderson County, Road Dist. No. 3, Athens, Tex.—Bids July 2 for road construction to amount of \$50,000; A. B. Axtell, Engr., Athens.

Road Construction.—United States Department of Agriculture, Department of Chief Clerk, Washington, D. C.—Bids until June 29 to construct experimental gravel road from Hunting Creek Bridge to Gum Spring, 4 $\frac{1}{2}$ mi.; specifications and proposal forms obtainable at office of Public Roads and Rural Engineering, 515 11th St., Washington; work to be divided into 2 sections; separate bids for each section.

Road Construction.—Houston County Board of Revenue, A. C. Crawford, Chrmn., Dothan, Ala.—Bids until July 10 to construct 20 mi. of road from near Dothan to Lucy; plans, specifications and profiles by W. R. Koonce, County Engr., on file with Mr. Crawford.

Road Construction.—Frederick County Commrs., H. L. Gaver, Clerk, Frederick, Md.—Bids until July 8 to construct 1.04 mi. State-aid highway upon or along Burkittsville-Knoxville Rd., and 1.52 mi. upon or along Monrovia-Hyattstown Rd.; bids to be made on blank forms furnished by State Roads Commission, 601 Garrett Bldg., Baltimore; plans can be seen and forms of specifications and contract obtained from State Roads Com.

Road Construction.—Randolph County Court, Thaddeus Pritt, Clerk, Elkins, W. Va.—Bids until July 1 to construct 19 mi. roads and streets in Leadville Dist.; to be let in sections; plans and specifications, etc. on file offices of County Clerk and Road Engr., Elkins, and of Chaney & Armstrong, Fairmont, W. Va.

Road Construction.—Corinth to the Gulf Dist., W. C. Sweat, Atty., Corinth, Miss.—To let contract July 6 to build 15 mi. gravel road.

Road Construction.—Beaufort County Commrs., W. E. Swindell, Chrmn., Washington, N. C.—Bids July 3 to construct $\frac{1}{2}$ to 2 mi. concrete road; specifications on file with Clerk of Board.

Road Construction.—Kenton County Fiscal Court, John B. Dillon, County Clerk, Covington, Ky.—Bids until June 22 to construct concrete road 18 ft. wide, 6 in. thick at sides and 8 in. thick in center; 52,100 cu. yds. shaping, 7600 cu. yds. concrete, 1440 cu. yds. local stone for shoulders; work to be let as whole or in sections of not less than 6245 ft.; plans and specifications may be seen and proposal forms obtained from John B. Dillon, County Clerk, Covington, or from Dept. of Public Roads, Frankfort, Ky.

Roofing (Cementile) Machinery.—See Brick Machines, etc.—Jas. A. Drake.

Roofing.—See Concrete Reinforcement, Cement, etc.—Stevens Bros. & Co.

Sacking Machinery, etc.—Stone Products Co., John T. Burrows, 53 Main St., Prest-Mgr., Bartow, Fla.—Prices on sacking machinery; 10,000 to 20,000 100-lb. bags; immediate shipment; manufactures mineral filler for asphalt pavement.

Saw.—Blount Lumber Co., Trafford, Ala. Horizontal band resaw; second-hand; good condition; also filing-room equipment for this resaw.

Saw Sharpeners.—Ram Dass, Glen Gorry Cottage, Dalhousie P. O., Punjab, India.—Catalogues and price lists of saw sharpening machinery.

Saw Blades.—Rowan County Freestone Co., Farmers, Ky.—Carload soft steel stone saw blades, $\frac{1}{4}$ to 5-32 in. thick, $\frac{3}{8}$ to $\frac{1}{2}$ in. wide, cut lengths 11 ft. 8 in., 13 ft. 8 in. and 17 ft. 8 in.

Sewer Construction.—B. A. Wise, City Mgr., Charleston, W. Va.—Bids until June 30 to construct sewer in Watts St. from Charleston to Patterson St., and Patterson St. from Watts St. to Anacosta Ave.; plans and specifications on file with J. M. Clark, City Engr., from whom further information may be obtained.

Sewer Construction.—City of Tulsa, Okla., H. H. Wyss, City Engr.—Bids to construct sanitary sub-main sewer on 15th St.;

length 365 ft.; plans, profiles and specifications from City Engr.; bids opened June 19.

Shafting.—See Concrete Reinforcement, Cement, etc.—Stevens Bros. & Co.

Sprinkler Systems.—Norfolk Warehouse Corp., Norfolk, Va.—Address of companies contracting to install sprinkler systems in cotton warehouses and cotton mills.

Steel Construction.—Oscar High, Whiteville, N. C.—Prices on steel construction for \$5000 mercantile building.

Steel Wire.—H. Vautier & Co., Lisbon, Portugal.—Steel wire for manufacturing carding tools.

Skylights.—Oscar High, Whiteville, N. C.—Prices on skylights for \$5000 mercantile building.

Tanks (Metal).—See Bottle-filling Machinery, etc.—Florida Fruit Products Co.

Tank.—Manufacturers Selling Agency, Brown-Marx Bldg., Birmingham, Ala.—150 bbls. horizontal lined oil storage tank; second hand; give full description.

Tanks.—C. C. Penny, 1923 Powell Ave., Birmingham, Ala.—Four storage tanks; closed or open; capacity 500 gals. or larger.

Terra-cotta.—See Building Materials.—R. H. Byrd & Co.

Tile.—Geo. P. Walker, Attalla, Ala.—Prices on tiling, 3x3 or 4x4-in.

Tools.—See Machine Tools, etc.—Detroit Gas Turbine Corp.

Trolleys and Trolley Tracks (Overhead).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on services and installation of overhead track and trolley equipment, Sch. 5786, Annapolis.

Tubing (Brass).—Tow-Lemons Mfg. Co., Springfield, Tenn.—Several sizes and good quantity of brass tubing.

Wagons (Asphalt).—Southern Paving Co., Dallas, Tex.—Prices on 10 asphalt wagons; new or second-hand.

Water-works Materials.—City of Cleveland, L. M. Guynes, Official.—Prices on

4200 ft. 4-in. water mains, 15 fire plugs, lead and jute.

Water-works and Electric Plant Construction.—City of Baldwin, Miss., W. A. Stocks, Mayor.—Bids until July 12 to construct water-works pumping station and electric-lighting plant includes furnishing and erecting pumping and power-house, reservoir, oil engine, generators and switch-board, electric line and street-lighting system; specifications, plans, etc., at office of Mayor, or will be mailed on application to Xavier A. Kramer, Consult. Engr., Magnolia, Miss.

Water-works Materials.—City of Cleveland, Miss., L. M. Guynes, Official.—Prices on 4200 ft. 4-in. water mains, 15 fire plugs, lead and jute.

Welding Equipment, etc.—Harry Donkle, Wilmington, N. C.—Data and prices on machinery for cutting and welding iron; acetylene or other method.

Wheel (Automobile, Steel) Manufacturers.—R. L. Bensley, Dothan, Ala.—Correspondence with manufacturers of wheels; view to arranging for making of automobile steel wheels, Mr. Bensley's invention.

Wire Cloth (Bronze).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 5100 sq. ft., 36-in. wide bronze wire cloth, Sch. 5793, delivery Norfolk.

Wire Fence.—Bay Biscayne Co., Box 584, Miami, Fla.—Prices on material to build wire fence 2108 ft. long and 10 ft. high.

Woodworking Machinery.—See Machine Tools, etc.—Detroit Gas Turbine Corp.

Woodworking (Toothpick) Machinery.—Geo. H. Leigh, Dryville, Va.—Data and prices on toothpick machinery.

Woodworking Machinery.—Hollingsworth Wheel Co., Hagerstown, Md.—Used or rebuilt 12 to 20-in. planer for hickory and oak rim strips.

RAILROAD CONSTRUCTION

RAILWAYS

Fla., Pensacola.—A report from Washington, D. C., says that the House of Representatives has passed a bill to authorize Geo. H. Hervey of Pensacola to build and operate an electric railway on the Fort Barrancas and Fort McNeil military reservations. It had already passed the Senate.

Fla., Kenansville.—South Florida & Gulf R. R. has completed its extension from Halsey as far as Prairie Ridge, 23 mi. from Kenansville, and will open it for traffic June 26. Maxwell A. Kilvert, Heard Bldg., Jacksonville, Fla., is Prest.; Fred B. Lynch, St. Paul, Minn., V.P.; Chas. H. Armstrong of Kenansville, Gen. Mgr.

Fla., St. Petersburg.—George Gandy, Sr., and others are reported interested in plans for the construction of an electric railway from St. Petersburg to Tampa, Fla., about 20 mi., including a bridge $\frac{3}{4}$ mi. long over Old Tampa Bay. Lewis B. Brown of St. Petersburg may be able to give information.

Fla., Tampa.—Charter is granted the Tampa & Eastern Traction Co., capital \$750,000, to build its proposed street and interurban railway from Tampa to Lakeland, Fla., about 33 mi. F. W. Cole, Prest.; E. J. Binford, V.P.; Frank L. Cooper, Secy.; P. M. Williams, Treas., all of Tampa.

Ga., Atlanta.—Southern Railway will consider proposition to build 4000 feet of industrial track in Ocmulgee St., from India St. to Wells St., to serve factories and develop vacant property. Property owners will obtain franchise. C. H. Dugan, Atlanta, is Asst. Engr.

Ga., Augusta.—The connecting line which the Savannah River Terminal Co. will build from the Augusta & Summerville R. R. to the city wharf, and also to the Charleston & Western Carolina Ry., will be constructed by company forces. Grading is slight. C. A. Wickersham is Prest.

Ga., Savannah.—Midland Ry. Co. has been granted right by the city to purchase a strip of land 18 ft. wide along the Ogeechee Canal to bring its line into Savannah. Atlantic Engineering Co., Savannah, Lawrence Manning, Prest., is contractor. George M. Brinson is Prest. of the railroad.

Ky., Beaver Creek.—Baltimore & Ohio R. R. will open bids at Baltimore June 23 for the construction of the Long Fork R. R. from a connection with Chesapeake & Ohio Ry. at the forks of Beaver Creek southward to Weeksbury, Ky., 26 mi. Work includes five

tunnels from 140 to 775 feet long. Francis Lee Stuart is Ch. Engr.

Miss., Kosciusko.—Kosciusko & Southeastern R. R. Co. will build from Kosciusko southeast to Zama, Miss., 15 mi., and desire bids for grading now. Has leased from the Illinois Central R. R. connection with which is made at Kosciusko, sufficient rail for the main line and 2 mi. of sidings and switches. A. L. Franklin of Kosciusko is Prest. and Gen. Mgr.; S. H. Bollinger of Shreveport, La., V.P., and J. Danner of the same place, Secy.

Miss., Gulfport.—The extension which the Gulfport & Mississippi Coast Traction Co. will build to the Hines Mill site will be 1 mi. long. Date for construction bids not decided. W. F. Gorenflo is Gen. Mgr. and W. H. Gardner, Jr., is Ch. Engr.

N. C., Sparta.—Alleghany County has voted \$60,000 more bonds to aid construction of the Elkin & Alleghany Railroad across the county 30 mi. C. B. Penney, Elkin, N. C., is Gen. Mgr.

Okla., Tulsa.—H. D. Patee denies press report which quoted him as saying that financing was arranged for the Tulsa Interurban Railway to build from Tulsa to Broken Arrow and Wagoner, Okla., about 37 mi., and that grading would begin in about a month. He says: "We are not seeking finance."

Tenn., Chattanooga.—Nashville, Chattanooga & St. Louis Railway denies press report that \$40,000 would be spent to extend and improve the Cravens yards.

Tenn., Nashville.—Nashville-Gallatin Interurban Ry. Co. will build extension Edenwold to Springfield, Tenn., about 18 $\frac{1}{2}$ mi.; committee, James E. Caldwell, Clarence M. Clark, H. H. Mayberry, H. H. Corson, N. S. Keith and Norman McD. Crawford. Route via Goodlettsville, Baker, Ridgeway, Hygeia and Greenbrier. Frank W. Hoover is Prest.; B. C. Edgar, Gen. Mgr.

Tenn., Tate Springs.—Col. J. W. Worthington, Tate Springs, Prest. Muscle Shoals Hydro-Electric Co., is reported interested in plans to build an interurban electric railway from Birmingham to Chattanooga via Sand Mountain, 147 mi. W. W. Shortridge, Hotel Empire, Birmingham, Ala., may also give information.

Tex., Aransas Pass.—Aransas Harbor Terminal Ry. Co. is reported contemplating further improvements. John D. Wheeler is V.P. at Aransas Pass.

Tex., Dallas.—E. P. Turner, V-P. Dallas Northwestern Traction Co., says survey has been made from Krum via Slidell and Greenwood to Bowie, about 45 mi., and it is believed financing will be arranged within two or three months. Construction will not begin until then. Line from Dallas to Bowie would be about 80 mi. altogether.

Tex., Galveston.—Improvements to the west yards to cost \$60,000 or \$70,000 are reported planned by the Gulf, Colorado & Santa Fe Ry. Tracks are to be raised three feet. F. Merritt, Galveston, is Ch. Engr.

Tex., Plainview.—Construction of a railroad from El Paso northward through the Texas Panhandle, proposed by the late F. S. Pearson, is still in view, according to a report from El Paso. J. M. Adams of Plainview may be able to give information.

W. Va., Millville.—Baltimore & Ohio R. R. will build two spurs from Millville to the quarries of the Keystone Limestone Co. and the Blue Ridge Limestone Co., respectively. F. L. Stuart, Baltimore, Md., is Ch. Engr.

W. Va., Wheeling.—Wheeling, Ohio & Eastern R. R. Co., which proposes to build a line from Wheeling to Rice's Landing and McCann's Ferry, Pa., about 60 mi., has organized with the following officers: C. R. Hubbard, Pres.; J. J. Holloway, V-P.; Thomas Swartz, Secy. These, with I. M. Scott and A. S. List, compose the executive committee.

STREET RAILWAYS

Ga., Columbus.—Columbus Railroad Co. has been granted amendment to charter to increase its capital stock from \$731,700 to \$1,289,340. Track will be extended. J. S. Blecker is Manager.

Ala., Mobile.—Mobile Light & Railroad Co. will extend its Dauphin St. line from Ashland Pl. to Tacon St., about half a mile. J. Howard Wilson is Pres.

English and American Tool Builders. By Joseph Wickham Roe. Published by the Yale University Press, 225 Fifth avenue, New York, N. Y. Clothbound. 315 pages. \$3 net.

That the supremacy of American manufacturing is due to the genius of its tool builders, is the theme of this book.

The history of the art of tool-making starts with the development and application of the steam engine, the boring lathe and lathe parts. An interesting genealogical sketch is recorded of the early English tool builders, whose skill brought about the hydraulic press, block machinery, flour, sawmill and mint machinery, punches, mill and marine steam engines, taps, dies, planers, shapers, etc. This account tells of the growth of these machine tools and the cumulative effect of the experience of these men upon the larger machines developed later.

Most interesting is the story of the American toolmakers, whose inventive talent caused a new phrase to become a part of our language—"Yankee ingenuity."

This genius, displayed in the inventions of the cotton gin in 1792 and other inventions following, was the cause for a great demand for machine tools. This demand was met by men around whose genius and skill were founded machine-tool companies which are today some of the most important and world renowned.

This book will be a valuable addition to the library of machine-tool makers of England and America.

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ala., Birmingham.—Morris Plan Co. has filed articles of incorporation, capital \$100,000. Robert Jemison, Sr., Pres.; Crawford Johnson, 1st V-P.; L. Sevier, 2d V-P., and M. M. Baldwin, Secy.-Treas.

Fla., Crestview.—First National Bank of Crestview is being organized with \$25,000 capital.

Fla., Tallahassee.—First National Bank is to be reorganized as the Lewis State Bank.

Fla., Tampa.—Mutual Fire Insurance Co.,

Inc., expects to begin business by Aug. 1. C. W. Greene, Pres.; T. L. Kennedy, V-P.; Chas. Davis, Treas.; Hafford Jones, Secy., and J. P. Oosting, Gen. Mgr.

Ga., Milledgeville.—Terminal Investment Co., capital \$12,500, has made application for charter; petitioners, M. S. Bell, Mayor; J. E. Kidd, both of Milledgeville, and G. Glen Toole of Macon.

Ga., Valdosta.—Security Savings & Loan Co., capital \$25,000, with privilege of increasing to \$100,000, has filed articles of incorporation. Petitioners: H. Y. Tillman, A. F. Winn, Jr., and W. R. Strickland.

Mo., Kansas City.—Midwest National Bank has made application for charter; capital \$300,000.

Mo., Kansas City.—Merchants' State Bank Incptd.; capital \$100,000; will begin business about Aug. 1 at 17 E. 5th St., with Alexander Kieger, Pres.; Edward Aaron, V-P.; G. A. Sievers, Cash.

N. C., Snow Hill.—First National Bank, capital \$200,000, will soon begin business with C. M. Mendenhall as Cash.

N. C., Zebulon.—Citizens' Bank of Zebulon is chartered; capital \$100,000. Organizers: G. M. Bell, W. H. Strickland, J. T. Horton and others. Business is to begin July 1.

Okla., Crescent.—First National Bank of Crescent has made application for charter; capital \$25,000.

S. C., Norway.—Bank of Norway has made application to convert into the First National Bank of Norway; capital \$25,000.

Tenn., Johnson City.—Tennessee Trust Co., capital \$50,000, is Incptd. by J. E. Brading, Geo. T. Wofford, Chas. E. Cargille, Jas. A. Ponder, Adam B. Crouch and S. C. Williams. Jas. A. Ponder will be Cash.

Tenn., Lewisburg.—Union Bank & Trust Co. recently chartered with \$50,000 capital has elected the following officers: C. C. Houston, Pres.; R. C. Armstrong, V-P. and S. S. McConnell, Cashier.

Tenn., Nashville.—Central Bank & Trust Co. has made application for charter; capital \$100,000. Incorporators: Watkins Crockett, Pres.; J. K. Joyner, V. J. Alexander, F. M. Bass, B. W. Landstreet, Herman Glick, J. R. Terhune, R. B. Brannan, S. E. Linton and George R. Gillespie.

Tex., Amarillo.—Guaranty State Bank has begun business; capital \$75,000; C. D. Bynum, Pres.; C. M. McCullough, V-P., and J. F. Joyner, Cash.

NEW SECURITIES

Ala., Decatur.—\$50,000 5 per cent. 20-year electric-light bonds are voted. Address Mayor Nelson.

Ala., Huntsville.—\$50,000 4½ per cent. 1-year temporary loan bonds have been purchased at \$50,513.75 by Farmers' Loan & Trust Co., New York.

Ala., Mobile.—Election will probably be called to vote on \$150,000 Mobile County school bonds. Bonds voted last January for this purpose were declared void. Address County Commrs.

Ark., DeWitt.—\$40,000 6 per cent. road bonds Arkansas County Road Dist. No. 1 have been purchased by Jas. Gould of Pine Bluff.

Ark., Stuttgart.—\$37,000 5 per cent. 20-year paving bonds Street Improvement Dist. No. 3 have been purchased by E. J. Hahn of Little Rock.

Fla., Avon.—Regarding the \$30,000 5 per cent. 30-year street bonds recently reported, R. W. Swearingen writes the Manufacturers Record that owing to error in election, another vote will have to be taken which will cause delay of about 60 days.

Fla., Bradentown.—\$75,000 6 per cent. 20-year \$1000 denomination road and bridge bonds Inglewood Dist., Manatee County were purchased at \$6 by Flz & Son, Birmingham, Ala. (Previously noted.)

Fla., De Land.—Bids will be received until 2.30 P. M. July 17 for \$60,000 6 per cent. Volusia county bonds Special Tax School Dist. No. 12, Volusia county. G. F. Crouch is Chrmn. Bd. Public Instruction, Volusia county.

Fla., De Land.—\$250,000 6 per cent. 5-25-year \$1000 denomination bonds New Smyrna Special Road and Bridge Dist., Volusia County, have been purchased at \$252,638 and accrued interest by Sidney Spitzer & Co., Toledo; C. W. McNear & Co., Chicago, and J. C. Mayer & Co., Cincinnati.

Fla., Fort Myers.—\$50,000 Lee County bonds have been purchased at \$52,280 by J. H. Hillsman & Co., Atlanta, Ga.

Fla., Gary.—\$20,000 municipal improvement and refunding bonds defeated.

Fla., Miami.—Election is to be held July 18 to vote on \$10,000 6 per cent. bonds Perine Special Tax School Dist. No. 12, Dade county. They will mature \$500 Aug. 1, 1921, and \$500 annually thereafter. Address Board of Trustees.

Fla., Miami.—\$25,000 jail, \$40,000 highway and \$35,000 bridge 5 per cent. Dade County bonds are voted. Z. T. Merritt is Clerk Board County Commrs.

Fla., Berry.—Election is to be held in Taylor county July 25 to vote on \$600,000 Dixie Highway bonds. Address County Commrs.

Fla., Palatka.—Bids will be received until 11 A. M. July 11 for \$25,000 6 per cent. 10-25-year bonds Bostwick Drainage Dist., Putnam county. D. P. Hancock is Chrmn. Board Drainage Commrs.

Fla., Sarasota.—Election will probably be called to vote on bonds for pier and park, amounts not to exceed \$20,000 and \$25,000, respectively. Address The Mayor.

Fla., Titusville.—\$300,000 6 per cent. 5-35-year \$1000 denomination Fourth Dist., Brevard county, road bonds have been voted. Dated July 1, 1916. Address R. M. Packard.

Fla., Titusville.—\$40,000 Indian River Bridge bonds, Brevard County, recently voted are 25-year 6 per cents. Address County Commrs.

Fla., Titusville.—Bids will be received until 6 P. M. July 15 by Edwin E. Macy, Secy. Board of Public Instruction, Brevard County, for \$50,000 6 per cent. \$1000 denomination school bonds, dated July 1, 1916, and maturing July 1, 1916. E. Svedelius is Chrmn. of Board.

Ga., Barnesville.—Bids will be opened July 17 for \$5000 5 per cent. \$1000 denomination school bonds maturing Jan. 1, 1942. Address B. M. Turner, Mayor.

Ga., Barnesville.—Bids will be received until July 17 for \$5000 5 per cent. \$1000 denomination school bonds; maturity Jan. 1, 1942. B. M. Turner is Mayor.

Ga., Cleveland.—Election is to be held August 5 to vote on \$30,000 4½ per cent. White County courthouse bonds. Address County Commrs.

Ga., Cochran.—\$12,000 sewer and \$300 light and water 5 per cent. 5-30-year \$1000 denomination bonds are voted. J. E. Cook is City Clk.

Ga., Cordele.—Election to vote on \$50,000 5 per cent. 30-year light and power plant bonds will be held Aug. 3. J. N. King is Chrmn. Finance Committee.

Ga., Fitzgerald.—Election will probably be called to vote on school bonds. David L. Paulk is City Clerk.

Ga., Folkston.—Regarding report that Commissioners of Charlton County were considering bond issue, a letter to the Manufacturers Record says: No bond issue; none in sight.

Ga., Rockmart.—Election is to be held July 15 to vote on \$30,000 5 per cent. 35-year bonds Rockmart School Dist., Polk County; denomination \$500; dated Aug. 1, 1916, and maturing Aug. 1, 1921 to 1950, inclusive. O. R. Sumerville is Chairman Board of Trustees.

Ga., Sale City.—Election will probably be held to vote on \$12,000 school building bonds. B. H. Dukes is Mayor.

Ky., Albany.—\$50,000 5 per cent. Clinton County road and bridge bonds have been purchased at \$1500 premium by James Caldwell & Sons, Nashville, Tenn., together with Cincinnati and Chicago firms.

Ky., Bedford.—Bids will be received until 11 A. M. July 3 for \$45,000 of the \$90,000 5 per cent. Trimble County road and bridge bonds recently voted. Address O. S. Joyce, C. T. C. C., Bedford.

Ky., Bloomington.—\$62,000 water bonds recently voted. Address The Mayor.

Ky., Brooksville.—\$200,000 Bracken County road bonds are voted. Address County Commissioners.

Ky., Cadiz.—\$150,000 4½ per cent. 30-year Trigg county road bonds are voted. Address County Commrs. M. S. Vauny, County Agt.

Ky., Hickman.—\$15,000 West Hickman levee bonds have been purchased at \$900 premium by Well, Roth & Co., Cincinnati.

Ky., Marion.—Election is to be held July 1 to vote on \$10,000 school bonds. Address Board of Trustees of Marion High School.

Ky., Newport.—Bids will be received until 10 A. M. July 7 by Chris. Millus, County Clerk, for \$100,000 4½ per cent. Campbell County road-improvement bonds; denomination \$500; dated July 15, 1916.

Ky., Whitesburg.—Election is to be called to vote on street-improvement bonds. Address The Mayor.

La., Alexandria.—Bids will be received until 10.30 A. M. July 18 for \$80,000 5 per cent. 20-year bonds Rapides Parish Road Dist. No. 6. H. S. Burnowes is Chrmn. Board of Commissioners.

La., Alexandria.—\$50,000 5 per cent. \$500 denomination Rapides Parish School Dist. bonds were purchased at \$50,530 by Whitney Central Trust and Savings Bank, New Orleans.

La., Coushatta.—Bids will be received until 10 A. M. July 11 by Police Jury Red River Parish for \$30,000 5 per cent. bonds Road Dist. No. 3; denomination \$500; maturity 1917 to 1934, inclusive.

La., St. Joseph.—Board of Commrs. of Fifth Louisiana Levee Dist. gives notice that it proposes to issue \$1,000,000 of levee bonds. E. C. Rhodes is Pres. and O. W. Campbell, Secy.

La., West Monroe.—\$45,000 5 per cent. 30-year \$500 denomination refunding and improvement bonds are voted. N. G. Tippit is Mayor.

Md., Baltimore.—Election is to be held in November to vote on \$1,000,000 school and \$1,000,000 conduit 4 per cent. 25-year loans. Richard Gwinn is City Register.

Md., Baltimore.—The \$2,303,400 4 per cent. city stock has been purchased at 99.27 by a syndicate headed by the Mercantile Trust & Deposit Co., Baltimore. Associated with the Mercantile are Baker, Watts & Co., Nelson Cook & Co., Townsend Scott & Son, Colston, Boyce & Co., Stein Bros., all of Baltimore, and some New York interests.

Md., Cumberland.—Special dispatch to Manufacturers Record says that \$100,000 4½ per cent. refunding and \$60,000 4½ per cent. bridge bonds have been purchased at 102.924 by Alexander Brown & Sons, Baltimore.

Md., Easton.—Bids will be received until noon June 27 for \$50,000 4½ per cent. Talbot County road bonds, dated July 1, 1916. Address County Commrs., Joseph B. Harrington, Treas.

Md., Elkton.—\$40,000 Cecil county road bonds are to be offered. John M. Kimble is Chrmn. County Commrs.

Md., Rising Sun.—Election is to be called to vote on \$16,000 water, paving and fire apparatus bonds. Address The Mayor.

Md., Rockville.—Bids will be received until noon July 25 for \$24,000 4½ per cent. \$500 denomination Montgomery county bonds. John R. Lewis is Pres. and Berry E. Clark, Clk. Bd. County Commrs. Montgomery County. Further particulars will be found in the advertising columns.

Md., Rockville.—Bids will be received until noon July 25 for \$20,000 4½ per cent. \$500 denomination bonds Montgomery county. John R. Lewis is Pres. and Berry E. Clark, Clk. County Commrs. Further particulars will be found in the advertising columns.

Md., Rockville.—Bids will be received until noon July 25 for \$58,000 4½ per cent. \$1000 denomination Montgomery county bonds. John R. Lewis is Pres. and Berry E. Clark, Clk. Bd. County Commrs. Further particulars will be found in the advertising columns.

Md., Rockville.—Bids will be received until noon July 25 for \$25,000 4½ per cent. \$500 denomination Montgomery county bonds. John R. Lewis is Pres. and Berry E. Clark, Clk. Bd. County Commrs. Further particulars will be found in the advertising columns.

Miss., Batesville.—Election is soon to be held to vote on \$5500 sewer bonds. Address The Mayor.

Miss., D'Lo.—Bids will be opened July 4 for \$30,000 6 per cent. 5-20-year bonds D'Lo Separate School Dist., Simpson county. E. A. Ross is Town Clk.

Miss., Ellisville.—The election to vote on \$3000 Ellisville high-school improvement bonds will be held July 1, Address Bd. of Education.

Miss., Ellisville.—Jones County Bd. of Supvrs. gives notice that it proposes to issue \$20,000 of bonds to aid in erection of South Mississippi Charity Hospital, to be located in Laurel. Laurel has already voted \$30,000 for this purpose.

Miss., Gulfport.—Bd. of Supvrs. Harrison County has decided to issue \$300,000 additional road bonds, also \$115,000 courthouse bonds.

Miss., Hazlehurst.—Bids will be received until 2 P. M. July 3 for \$50,000 5 per cent. 25-year \$500 denomination bonds to refund bonded indebtedness of Copiah County; dated Aug. 7, 1916. D. C. Woods is County Treas.

Miss., Hazlehurst.—Bids will be received

[For Additional Financial News, See Pages 74, 75 and 76.]

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

June 22, 1916.]

Reprinted from
Manufacturers Record, June 8, 1916.

Polk County, Florida, Votes \$1,500,000 for Roads.

The largest single bond issue ever voted by any county in the South for good roads was ratified by the citizens of Polk county, Florida, last week by a majority of 2 to 1. It provided for an issue of \$1,500,000.

The work to be carried out under this bond issue covers 217 miles, included in which is a 55-mile section of the Dixie Highway. These roads have been so arranged that they provide for the building of highways through all parts of the county and connecting with the main highways of adjoining counties, and carry out, in a large part, the slogan of the Polk County Good Roads Association of providing a road "from every town in the county to every other town in the county."

In submitting the bond issue to the citizens for ratification the commissioners followed the usual program now in use in Florida of making contracts for specific roads, subject to the issuance of bonds by popular vote. Plans and specifications for their construction were drawn by H. S. Jaudon Engineering Co. of Savannah, Ga., and Bartow, Fla.; bids were received upon the work and all contracts were awarded before the bonds were submitted to the people.

Thus the people of the county knew exactly where the roads were to be built, of what material they were to be constructed and exactly what they were to cost, and were able to register their votes upon a thoroughly definite proposition. The fact that Polk county voted at a majority of 2 to 1 emphasizes the progressiveness of its people.

The entire system of roads is to be built of two inches of sheet asphalt on clay foundation four inches thick after compression under a 10-ton roller, and the specifications were so drawn that they provided for a sheet-asphalt pavement similar to those laid in large cities.

In connection with the road system 20 reinforced concrete bridges and 90 reinforced concrete culverts are to be constructed. The entire work is to be completed in 400 days. The various contracts were awarded as follows:

Division 1—W. P. McDonald Construction Co., Mt. Vernon, N. Y., \$284,963.75.

Division 2—Continental Public Works Co., New York, N. Y., \$218,478.75.

Division 3—Eureka Paving Co., Houston, Tex., \$299,694.75.

Division 4—E. C. Humphrey, Hackensack, N. J., \$232,630.

Division 5—Edwards Construction Co., Tampa, Fla., \$272,195.

Bridges (all divisions)—Champion Bridge Co., Wilmington, O., \$79,809.30.

Reinforced Concrete Culverts (all divisions)—Edwards Construction Co., Tampa, Fla., \$66,125.

The bonds voted are serial ones of the denomination of \$1000. Two hundred and fifty of the bonds will be due and payable annually at the rate of \$50,000 per annum between the years 1921 and 1925, inclusive. The second series of 750 bonds will be due and payable annually at the rate of \$75,000 per year between 1926 and 1935, inclusive. The third series of 500 bonds will be due and payable annually at the rate of \$100,000 per year between 1936 and 1940. The bonds bear 5 per cent. interest.

The Board of County Commissioners by resolution made as bond trustees to handle the funds, Messrs. W. H. Lewis of Fort Meade, T. L. Wilson of Bartow and C. M. Clayton of Lakeland. In addition, the commissioners also appointed an advisory board from the Polk County Good Roads Association, consisting of one member from each commissioner's district, these being C. C. Martin of Mulberry, H. M. Mansfield of Fort Meade, J. N. Hooker of Bartow, H. W. Snell of Winter Haven and M. F. Hetherington of Lakeland.

The Board of County Commissioners in direct charge of the work are J. C. Swindel, chairman, Lakeland; J. E. Lancaster, Chicora; John S. Howard, Eloise; A. T. Mann, Bartow; W. T. Hurst, Fort Meade, and J. A. Johnson (clerk), Bartow, Fla.

The Board of County Commissioners The Designing Engineers and Five of the Contracting Firms

in charge of

Polk County's \$1,500,000 Road Work

*The Largest Single Road Bond Issue
Ever Voted by Any Southern County*

Are Subscribers to

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MANUFACTURERS RECORD

Subscribes to the Manufacturers Record
at both Savannah, Ga., and Bartow, Fla.

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You Should Read the Manufacturers Record
if you want to get the quickest and fullest
information about Road Work in the South.

And Advertise in the Manufacturers Record
if you want to sell road materials, equip-
ment or machinery in the South.

MANUFACTURERS RECORD
BALTIMORE, MD.

Merchants-Mechanics National Bank

South and Water Sts., BALTIMORE, MD.
DOUGLAS H. THOMAS, President.
JNO. B. RAMSAY, V-P. and Chm. Bd. of Dir.
JOHN B. H. DUNN, Cashier.
Capital \$2,000,000. Deposits \$21,670,000.
Surplus and Profits \$2,175,000.
Accounts of Banks, Bankers, Corporations and Individuals solicited.
We invite correspondence.

The National Exchange Bank OF BALTIMORE, MD.

Hopkins Place, German and Liberty Sts.
Capital \$1,500,000.
March 30, 1915. Surplus and Profits, \$850,000.00.
OFFICERS:
WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-Pres.
E. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.
Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

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City, County, School and Road, from Municipalities and Contractors.
WRITE
THE PROVIDENT SAVINGS BANK & TRUST CO.
CINCINNATI OHIO

Municipal Bonds BOUGHT

from Contractors and Municipalities
STACY & BRAUN
Second National Bank Bldg., TOLEDO, O.

First National Bank RICHMOND, VIRGINIA

Capital and Surplus - - - - \$3,000,000
JNO. E. PURCELL, President.
JNO. M. MILLER, JR., Vice-Pres.
W. M. ADDISON, Cashier.

WE BUY BONDS CITY, COUNTY, SCHOOL DISTRICT

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SIDNEY SPITZER & CO., Spitzer Building, TOLEDO, OHIO
NEW YORK CHICAGO CINCINNATI

FOR SALE Timber, Coal, Iron, Ranch and Other Properties.

Southern States, West Indis., Mexico.
GEO. B. EDWARDS
(Broker.)
Tribune Building, NEW YORK, N. Y.
Confidential Negotiations, Investigations, Settlements and Purchases of Property.

Maryland Trust Company BALTIMORE

Capital \$1,000,000
TRANSACTS A GENERAL TRUST AND BANKING BUSINESS
Correspondence and interviews invited

The Investment Situation

is summarized, and in addition there are some Investment Suggestions that are particularly appropriate at the present time, in our latest circular which we shall be glad to send on request.

Ask for Circular AG-182.

A. B. Leach & Co.

Investment Securities
62 Cedar St., New York
Chicago Philadelphia Buffalo
Boston Baltimore

Delaware Corporations organized through the office of the DELAWARE REGISTRATION TRUST COMPANY, successor to Corporation Department, Delaware Trust Company, 900 Market street, Wilmington, Delaware.

The Delaware law is stable, provisions liberal, and at a minimum cost—departments for organization, acting as Registrar and Transfer Agent.

J. Ernest Smith, President & General Counsel.
Chas. Warner Smith, Vice-President.
Harry W. Davis, Secretary and Treasurer.
Charles B. Bishop, Assistant Secretary.

The First National Bank OF KEY WEST, FLA.

United States Depository and Disbursing Agent.
Capital \$100,000
Surplus and Undivided Profits . . 40,000
A general banking business transacted.
Special attention given to collections.

THE TILLOTSON & WOLCOTT CO. CLEVELAND, OHIO

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Correspondence Solicited

POWELL, GARARD & CO.

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We Buy Southern Municipal Bonds (County, City, School, Road and Drainage District).

JOHN NUVEEN & CO.

First National Bank Building, CHICAGO
We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.
Write us if you have bonds for sale.

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On Legacies, Inheritances, Stocks, Bonds, Notes, Accounts Receivable, Warehouse Receipts, Raw Material or Manufactured Product.

L. N. ROSENBAUM & CO.
80 Wall Street NEW YORK

Manufacturers and Farm Loans

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We offer mortgages of the choicest character on farms in Georgia and Alabama. These States are leaders in the great campaign of crop diversification that will revolutionize the South.

It is inevitable that land values will increase from year to year.

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Atlanta, Ga.

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BANK STATIONERS BALTIMORE, MD.
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Blank Book Makers, Book Binding
Letter Heads, Office Supplies
Steel Die Work

until 2 P. M. July 6 for the following bonds: \$3500 6 per cent. \$500 denomination bonds of Suprvs. Dist. No. 2, Copiah County, dated Aug. 7, 1916, also for \$2000 6 per cent. \$100 denomination bonds Hopewell School Dist., Copiah County. D. C. Woods is County Treas. and J. C. Smith Clerk of Board of Suprvs.

Miss. Meridian.—Election is to be held June 27 to vote on \$30,000 5 per cent. 30-year bonds to purchase Hamilton lake property. J. W. Parker is Mayor.

Miss. Moss Point.—At 7:30 P. M. July 4 city will sell \$6000 6 per cent. street-improvement bonds. C. H. Wood is Mayor and John F. P. Blumer, Clk.

Miss. Okalona.—Bids will be received until noon July 3 for \$33,000 Dist. No. 1 5½ per cent. and \$7000 Dist. No. 4, not over 6 per cent. \$500 denomination Chickasaw County bonds, dated August 1, 1916 and maturing August 1, 1926 to 1939. Address W. A. Wilkinson, Chancery Clerk.

Miss. Pascagoula.—Bids will be received until noon July 3 for \$50,000 5 per cent. Jackson county bridge bonds, dated July 15, 1916, and maturing July 15, 1926 to 1940, inclusive. Denomination \$1000. Address Bd. County Suprvs. Jackson County.

Miss. Paulding.—\$15,000 6 per cent. 21-year \$500 denomination bonds Suprvs. Dist. No. 3, Jasper county, have been purchased at par and interest by William R. Compton Co., St. Louis.

Miss. Senatobia.—The Board of Suprvs. Tate County, will on July 3 issue \$200,000 road bonds. On the same date \$500 bonds Independence Consolidated School Dist. are to be issued. J. A. Wooten is Clk. of the Board.

Miss. Sumrall.—Election is to be held July 4 to vote on \$20,000 water-works bonds. J. I. Brueck is City Clerk.

Miss. West Point.—\$15,000 audit-tem bonds defeated.

Mo., Bloomfield.—\$15,000 6 per cent. \$500 denomination Stoddard County jail bonds have been purchased at 113½ by a St. Louis firm. R. F. Jones is County Clerk.

Mo., Carrollton.—\$8000 5½ per cent. 5-20-year Tina School Dist., Carroll county, bonds have been purchased by the banking house of Wisconsin & Co., Carrollton.

Mo., Chaffee.—Bids will be received until 8 P. M. June 30 by E. D. Preston, City Clerk, for \$21,000 water-works and \$13,000 sewer 6 per cent. 10-year bonds, dated July 1, 1916, and maturing July 1, 1936, optional after 1926.

Mo., Huntsville.—\$30,000 Randolph county poor farm bonds are reported voted. Address County Commrs.

Mo., Kansas City.—Bids will be received until 10 A. M. July 3 by G. H. Edwards, Mayor, for \$100,000 4½ per cent. 20-year \$1000 denomination Blue River Improvement bonds, dated July 1, 1915.

Mo., Madison.—\$16,000 school bonds reported voted have been declared void. Another election will probably be held Sept. 5. H. M. Featherstone is Clerk, School Board.

Mo., Springfield.—\$45,000 refunding bonds have been purchased at \$105.01 by Commerce Trust Co., Kansas City, Mo.

Mo., Springfield.—Election is to be held in Greene County to vote on \$50,000 sanitarium bonds. Address County Commrs.

N. C., Apex.—\$12,000 6 per cent. \$500 denomination electric-light bonds were voted

June 13, and bids for same will be opened July 3; dated July 1, 1916; maturity July 1, 1941; J. F. Mills, Sam Watkins and J. W. Lassiter, Committee. W. P. Betts is Town Clerk.

N. C., Concord.—\$76,000 assessment and improvement 5 and 6 per cent. bonds have been purchased at \$3275 premium by Sidney Spitzer & Co., Toledo, O.

N. C., Dobson.—\$25,000 6 per cent. 30-year \$1000 denomination Stewarts Creek Township, Surry County, road bonds have been purchased at par, accrued interest and \$133 premium by Sidney Spitzer & Co., Toledo, O.

N. C., Elizabethtown.—Bids will be received until July 3 by R. J. Cromartie, Supt. Public Schools Balden County, for \$20,000 5 per cent. school bonds.

N. C., Greensboro.—\$10,000 Buffalo School Dist., Guilford county, bonds recently voted are 30-year 5 per cent. Date for opening bids will be fixed July 3. Thos. A. Faust is County Supt.

N. C., Kernersville.—\$10,000 electric-light bonds are voted. Address The Mayor.

N. C., Scotland Neck.—Steps are reported being taken to issue bonds for water works, sewerage and paving. Address The Mayor.

N. C., Sparta.—Alleghany County has voted \$80,000 5 per cent. 30-year railroad-aid bonds. Address County Commrs.

N. C., Warrington.—\$15,000 6 per cent. 20-year bonds Littleton Graded School Dist., Warren county, are voted and bids for same will be opened at noon July 3. Address Howard F. Jones, Secy. Further particulars will be found in the advertising columns.

Okla., Ada.—Election is to be held in near future to vote on \$80,000 high-school bonds. Address Board of Education.

Okla., Atoka.—\$75,000 school bonds were recently voted. Address School Board.

Okla., Bixie.—\$25,000 water-works bonds are reported voted. Address The Mayor.

Okla., Eufaula.—Election is to be held June 27 to vote on \$25,000 5 per cent. 20-year \$1000 denomination water-works bonds. The bonds have already been sold at par and interest as follows: Eufaula Board of Education, \$10,000; McIntosh County Treasurer, \$15,000. W. C. Metcalfe is Mayor.

Okla., Holdenville.—Election is to be held about July 18 to vote on \$325,000 Hughes County courthouse, jail, road and bridge bonds. Address County Commrs.

Okla., Marshall.—Reported that \$30,000 school building bonds are to be issued. Address Bd. of Education.

Okla., Mangum.—Election is to be held July 1 to vote on \$10,000 bonds for park for Greer County Free Fair. Address Mayor Borden.

Okla., Welch.—\$24,000 6 per cent. 5-20-year water-works bonds have been purchased by Robinson & Taylor.

S. C., Taylors.—\$7000 6 per cent. bonds School Dist. No. 9, Greenville County, have been purchased at \$7253 and interest by J. H. Hillsman & Co., Atlanta, Ga.

Tenn., Penton.—\$8000 Polk county school warrants have been purchased at \$8075 by N. W. Hakey & Co., Chicago.

Tenn., Gallatin.—\$6000 5 per cent. 14-year Sumner County warrants have been purchased by the Valley National Bank of Nashville.

Tenn., Henderson.—Election is to be held in Aug. to vote on \$100,000 Chester County road-construction bonds. Address County Commrs.

Tenn., Johnson City.—Election ordered for June 17 to vote on \$55,000 bonds for refunding floating indebtedness has been called off.

Tenn., Madisonville.—On July 8 at the Courthouse door in Madisonville \$175,000 5 per cent. Monroe County Road Improvement Bonds maturing July 8, 1941 to July 8, 1951, inclusive, will be offered for sale. A. M. Swaney, Vonore, Tenn., is Chrmn. County Court, and Jno. B. Pennington, Madisonville, Clerk. Further particulars will be found in the advertising columns.

Tenn., Maryville.—\$200,000 5 per cent. 10-40-year Blount County road bonds have been purchased at par, accrued interest and premium of \$1800 by R. B. Oliver of Maryville.

Tenn., Memphis.—Bids will be received until 2:30 P. M. July 11 by C. C. Pasby, City Clerk, for the following bonds: \$175,000 for refunding street-improvement bonds, interest 4½, 4¼ or 5 per cent.; \$38,000 general liability bonds for street improvements, bearing 6 per cent. interest.

Tenn., Trimble.—Bids will be received until noon July 1 by T. A. Pierce, Town Recorder, for \$5000 6 per cent. electric-light bonds.

Tex., Aransas Pass.—\$75,000 Aransas Pass

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Ed. Dist., San Patricio County, bonds were recently voted. Address County Commrs.

Tex., Aransas Pass.—Elections are to be held in San Patricio County to vote on road bonds as follows: Independent Road Dist. No. 5, \$50,000; Sodyville Dist., \$10,000. Address County Commrs.

Tex., Austin.—The Attorney-General has approved the following securities: \$10,000 5 per cent. 10-40-year street bonds of West.

Tex., Barstow.—Bids will be received until 10 A. M. July 16 for \$18,000 5 per cent. 20-40-year bonds School Dist. No. 1, Ward county. Burch Carson is County Judge.

Tex., Beaumont.—Election is to be held July 18 to vote on \$300,000 5 per cent. \$500 and \$1,000 denomination school bonds. J. G. Sutton is City Secy.

Tex., Bonham.—Fannin County school bonds have been voted as follows: Bailey Dist. No. 63, \$10,000; Whatley Dist. No. 53, \$300; Bigbee Dist. No. 110, \$1,000; Bettles Dist. No. 99, \$1,100. Address County Commrs.

Tex., Brenham.—\$300,000 Precinct No. 3, Washington County, road bonds defeated.

Tex., Brownwood.—\$6000 5 per cent. bonds common School Dist. No. 37, Brown County, were recently voted. F. H. Sweet is County Judge.

Tex., Brownwood.—\$6000 5 per cent. 5-40-year \$100 denomination Cannon School Dist., Brown County, bonds were recently voted. Date for opening bids not yet decided. Address Mrs. E. L. Walker, County Supt.

Tex., Christine.—\$15,000 6 per cent. 1-29-year warrants have been purchased by J. L. Arlitt, Austin, Tex.

Tex., Colorado.—\$1500 school bonds Shepherd School Dist., Mitchell County are voted. Address Board of Trustees.

Tex., Corpus Christi.—Election is to be held July 8 to vote on \$150,000 40-year street-paving bonds. Roy Miller is Mayor. (Previously mentioned.)

Tex., Corsicana.—\$180,000 Frost Precinct and \$100,000 Dawson Dist., Navarro County, road bonds are voted. Address County Commrs.

Tex., Donna.—\$425,000 5 per cent. Donna Irrigation Dist., Hidalgo County No. 1, bonds are being offered for sale. Address Donna Irrigation Dist., Hidalgo County No. 1, Donna, Tex., or James B. Wells, Atty.-at-Law, Brownsville, Tex. Further particulars will be found in the advertising columns.

Tex., Eastland.—\$60,000 Eastland county road bonds defeated.

Tex., Emhouse.—\$20,000 5 per cent. bonds Emhouse School Dist. No. 22, Navarro County, have been purchased by Powell, Garard & Co., Chicago, at 100.69 and interest.

Tex., Fort Worth.—\$8000 Rosen Heights Independent School Dist., Tarrant County, bonds are voted. Address County Commrs.

Tex., Fort Worth.—Election will probably be called to vote on \$640,000 bonds for schools, sewage plant, viaduct, levee and other improvements. Address Mayor Tyra.

Tex., Gilmer.—Bids will be opened July 10 for \$100,000 5 per cent. 40-year \$1250 denomination bonds Road Dist. No. 1, Upshur

County; dated July 1, 1916. W. H. McClelland is County Judge.

Tex., Hillsboro.—Election will probably be called to vote on \$100,000 Abbott Dist., Hill County, road bonds. Address County Commissioners.

Tex., Kingsville.—Election is to be held June 24 to vote on \$150,000 40-year bonds to purchase water plant. Address The Mayor.

Tex., Kountze.—\$224,000 5 per cent. 1-40-year \$500 denomination bonds Road Dist. No. 3, Hardin County, have been purchased at par by J. O. Fountain.

Tex., Llano.—\$9000 bonds Independent School Dist. No. 1 are voted. Address Board of Education.

Tex., McAllen.—Bids will be received until July 1 by R. H. Osborn, Secy. School Board, for \$80,000 school bonds.

Tex., Mount Vernon.—\$75,000 Dist. No. 1, Franklin County, road bonds are voted. A. L. Reaves is County Judge.

Tex., Rusk.—\$12,000 5 per cent. 10-40-year high-school bonds are voted. A. M. Vining is Secy. School Board.

Tex., San Antonio.—\$7000 school bonds Dist. No. 27 (Van Army), Bexar county, are voted. Address Judge C. A. Fisher, Van Army.

Tex., San Antonio.—Election to vote on \$1,000,000 Pan-American Exposition bonds is to be held July 17. Address The Mayor.

Tex., Taylors.—Election is to be held July 3 to vote on \$50,000 paving bonds. W. E. Dozier is City Mgr.

Tex., Victoria.—\$35,000 sewage-disposal-plant bonds are voted. Address The Mayor.

Tex., Willsboro.—\$50,000 road bonds are voted. Address The Mayor.

Tex., Yorktown.—Election is to be held June 27 to vote on \$10,000 Yorktown School Dist., De Witt County, bonds. Address Board of Trustees.

Va., Covington.—\$100,000 Covington Magisterial Dist., Alleghany County road improvement bonds are voted. Address County Commissioners.

Va., Eastville.—Bids will be received until noon July 3 by Geo. T. Tyson, Clerk Board of Supvs. Northampton County, for \$10,000 5-30-year \$500 denomination road bonds Franktown Magisterial Dist., Northampton County.

Va., Front Royal.—Reports state that \$19,000 6 per cent. 20-30-year electric-light-plant bonds were voted May 23. As soon as plans and specifications are completed bids will be asked. Address W. W. Sonner, Front Royal. S. G. Waller is Mayor.

Va., Harrisonburg.—\$75,000 4½ per cent. 25-year street and other improvement bonds have been purchased at \$75,012.50 and accrued interest to date of delivery by Frederick E. Nolting & Co. and American National Bank, Richmond, Va.

Va., Leesburg.—Bids will be received until noon June 28 for \$30,000 4½ per cent. high-school bonds, dated July 1, 1916, and maturing July 1, 1946; optional after 1917. S. B. Pexson is Clerk School Board.

Va., Manassas.—Bids will be received until 5 P. M. July 10 by Town Finance Com. for \$20,000 4 per cent. 30-year municipal bonds,

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dated Aug. 1, 1916 denomination \$500; also bids on same bonds at 4½ per cent, maturing \$1000 annually beginning Aug. 1, 1925. Bids on same bonds with different arrangement of maturity and interest rate will also be given consideration.

Va., Mason City.—Election is to be held July 7 to vote on \$40,000 high-school bonds. Address Bd. of Education.

Va., Norton.—Bids will be received until July 1 for \$15,000 5 per cent, 30-year \$500 denomination street improvement bonds, dated June 1, 1910 and maturing June 1, 1940. T. M. Pepper is Mayor. (Previously noted.)

Va., Rustburg.—\$200,000 Brooksville and \$40,000 Seneca Magisterial Dist. 4½ per cent. Campbell County road bonds have been purchased at \$100.25 by People's National Bank of Lynchburg.

Va., Salem.—Question of calling election to vote on \$150,000 bonds Cave Spring Magisterial Road Dist. is reported under consideration. Address County Commrs.

Va., Shenandoah.—No satisfactory bids were received June 14 for \$25,000 5 per cent, 30-year \$500 denomination school bonds offered on that date. Address M. T. Koontz.

W. Va., Brooksville.—All bids received June 6 for \$10,000 6 per cent, 30-year school bonds were rejected. New bids are now invited at 5 per cent. E. M. Chilcoat is Town Clerk.

W. Va., Charleston.—\$125,000 4½ per cent. Charleston Independent School Dist. bonds are voted. W. O. Dawn is Secy., Board of Education.

W. Va., East Bank.—Bids will be received until noon July 21 for \$5000 6 per cent, 30-year \$1000 denomination municipal bonds. C. H. Maties is Town Recorder.

W. Va., Fayetteville.—\$175,000 Sewell Mountain Dist., Fayette County, road bonds are voted. R. J. Stegall is Clk. County Court.

W. Va., Kingwood.—\$164,000 5 per cent. Kingwood Dist., Preston County, road-improvement bonds have been purchased by Sidney Spitzer & Co., Toledo, for \$164,350.

W. Va., New Martinsville.—\$240,000 5 per cent, 30-year Church Dist., Wetzel County, road bonds have been purchased at par plus accrued interest and \$2511 premium by Otis & Co., Cleveland, O.

W. Va., Wellsburg.—Election is soon to be held in Brooke County to vote on \$300,000 road-construction bonds. Address County Commrs.

W. Va., West Union.—\$200,000 Metcalf Dist., Doddridge county, road bonds defeated.

FINANCIAL NOTES

The eighth annual meeting of the South Carolina Building and Loan League will be held at Chick Springs and Greenville June 27 and 28. W. M. Shannon is Pres.

The North Carolina Bankers' Association, at its annual convention in Asheville last week, elected officers as follows: Pres., W. S. Blakeney of Monroe; V.-Ps., first, W. B. Drake of Raleigh; second, James A. Gray, Jr., of Winston-Salem; third, Joseph B. Ramsey of Rocky Mount; Secy. and Treas., W. A. Hunt of Henderson.

The total resources of the national banks in the United States, according to a recent announcement of the Comptroller of the Currency, are more than \$14,000,000,000, their increase from March 7 to May 1 having been \$256,000,000. Deposits total more than \$11,000,000,000, their increase in the same time having been \$341,000,000.

The gold reserve of the Federal Reserve Banks now totals \$367,986,900. It increased \$7,000,000 last week.

The Mississippi State Banking Department reports that the 276 State banks there have total resources, as of May 1, amounting to \$68,869,886.

The General Gas & Electric Co. has declared its regular quarterly dividend of 1½ per cent, on its cumulative preferred stock, payable July 1, 1916, to stockholders of record at the close of business June 20, 1916.

The Bankers' Loan & Securities Co. of New Orleans, organized some time ago for general financing purposes and to specialize on rural and small-town securities, has announced an increase in its capital stock to meet the demand of over-subscription of from \$1,000,000 to \$1,500,000. President James L. Wright has gone to New York to complete arrangements for the sale of several issues of Louisiana securities underwritten by the company.

SALE OF Used Material and Equipment

Belonging to Pennsylvania Tunnel & Terminal Railroad Company, located at Front and Flushing Streets, Long Island City, N. Y.

Sealed Proposals in lump sum bid will be received up to July 10th, 1916, for the entire plant, consisting of the following material, subject to sales prior to June 24th:

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INDUSTRIAL NEWS OF INTEREST

New Asbestos Metal Representative.

The Asbestos Protected Metal Co., Pittsburgh, announces that hereafter it will be represented in Cincinnati, O., and surrounding territory by E. G. Irwin, located in the Union Trust Bldg., Cincinnati.

Pulverizer Branch Office Opened.

The K-B Pulverizer Co., Inc., 86 Worth St., New York, has opened a branch office at 704 Bulletin Bldg., Philadelphia, Pa., under management of Charles M. Connor, well known among the machinery trade of that district.

Oxy-Hydrogen Plant Purchased.

Franz Krull, Ltd., of Reval, Russia, recently placed an order with the International Oxygen Co., 115 Broadway, New York, for a large oxy-hydrogen plant of the unit type generators. The gases produced by this plant are to be used for welding and piped throughout the entire works of the purchaser.

City Office for Dixie Culvert.

On account of the material increase of its business during the past 60 days the Dixie Culvert & Metal Co. has moved its office from the main works at East Point, Atlanta, Ga., to 3248 Healey Bldg., Atlanta, thus bringing the administrative force in the heart of the city and in closer touch with the visiting public.

Enters Private Chemical Practice.

Announcement is made that Isaac H. Levin has resigned his position as chief engineer and chemist of the International Oxygen Co., 115 Broadway, New York, in order to devote his time to chemical research and as a specialist in the electrolytic field, with temporary address at 186 Hillside Ave., Newark, N. J.

Steel Works Reorganized.

Announcement is made that Edward F. Terry has formed the Edward F. Terry Manufacturing Co., Grand Central Terminal, New York, to carry on the business of manufacturing cranes, derricks, structural steel, etc., formerly done by the Terry & Trench Company, Inc., of the same address. The business of the latter will continue as previously, except for the change noted.

Southern Steel for Cuban Mill.

Among recent contracts received by the Virginia Bridge & Iron Co., Roanoke, Va., is an order for 400 tons of steel. This material is to be shipped to the Central Palma Sugar Factory, Central Palma, Cuba, for building an addition to that sugar manufacturing plant.

Contracting and Quarrying Equipment.

A special offer of second-hand contracting and quarrying equipment by W. V. Johnson, 1 Madison Ave., New York, features two rebuilt automobile trucks with dump bodies, one a 5-ton Pierce Arrow, one a 6-ton Sauer, besides which a complete stock of second-hand locomotives, cranes, rails, cars, steam shovels, hoisting engines, derricks, air compressors, rock crushers, drills, pumps, concrete mixers, boilers, engines and electrical equipment is on hand.

Successful Mill Sale.

With ideal weather conditions prevailing, J. E. Conant & Co., Lowell, Mass., conducted what is considered by the auctioneer a very successful sale of the property of the Buell Manufacturing Co., St. Joseph, Mo., formerly woolen manufacturer. What is considered by the auctioneer as unusual and complimentary to St. Joseph is that, although the machinery was in good condition and received fairly ready sale, there was far more demand for the real estate.

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